ORDER NO. MD0403140C1

A6

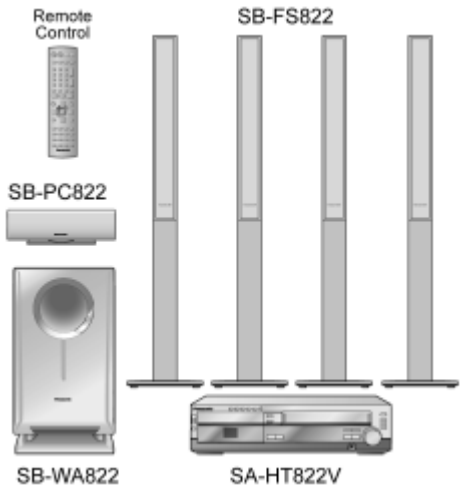
Service Manual

DVD/VHS Home Theater Sound System

SA-HT822VP

Colour

(S)... Silver Type



Specifications

■ AMPLIFIER SECTION

RMS output power, 10 % total harmonic distortion

1 kHz FL/FR	50 W per channel 6 Ω
1 kHz Center	150 W per channel 6 Ω
1 kHz SL/SR	50 W per channel 6 Ω
100 Hz Subwoofer	200 W per channel 4 Ω
Total RMS Dolby Digital mode power	550 W
FTC output power, 1 % total harmonic distortion	
120 Hz - 20 kHz FL/FR	28 W per channel 6 Ω
120 Hz - 20 kHz Center	100 W per channel 6 Ω
120 Hz - 20 kHz SL/SR	28 W per channel 6 Ω
45 Hz - 120 kHz Subwoofer	128 W per channel 4 Ω
Total FTC power in Dolby Digital mode (Band 1 % THD)	340 W
Input sensitivity	
AUX	250 mV
Input impedance	47 kΩ

■ DISC SECTION

Discs played [8 cm (3”) or 12 cm (5”)]

1. DVD-RAM (DVD-VR formatted discs, JPEG formatted discs)
2. DVD-Audio
3. DVD-Video
4. DVD-R (DVD-Video formatted discs)
5. CD-Audio (CD-DA)
6. Video CD
7. SVCD (Conforming to IEC62107)

8. CD-R/CD-RW (CD-DA, Video-CD, SVCD, MP3, WMA, JPEG formatted discs)
9. MP3/WMA
   - Maximum number of tracks and groups recognizable:
     999 tracks and 99 groups
   - Compatible compression rate:
     MP3: between 32 kbps and 320 kbps
     WMA: between 48 kbps and 320 kbps
10. JPEG
    - Exif Ver 2.1 JPEG Baseline files
    - Maximum number of pictures and groups recognizable:
      4000 pictures and 400 groups
    - Picture resolution: between 320x240 and 6144x4096 pixels
      (sub sampling is 4:2:2 or 4:2:0)
11. HighMAT Level 2 (Audio and Image)

Video	
Signal system	NTSC
Output level	Composite video; 1 Vp-p (75Ω)
	S-video; 1 Vp-p (Y), 0.286 Vp-p (C) (75Ω)
	Component video; 1 Vp-p (Y) (75Ω)
	0.7 Vp-p (P_B/C_B, P_R/C_R) (75Ω)
Audio	
Sampling frequency	
CD	44.1 kHz
MP3	32 kHz, 44.1 kHz, 48 kHz
DVD-Linear	48 kHz, 96 kHz
DVD-Audio	192 kHz
Decoding	16/20/24 bit linear
Pick up	
Beam Source	Semiconductor Laser
Wavelength	
CD/VCD	785 nm
DVD	662 nm
Number of channels	5.1 ch (FL, FR, SL, SR, C, SW)
Frequency response	20 Hz - 20 kHz (+1, -2 dB)

■ VHS SECTION

Video recording system	2 rotary heads, helical scanning system
Video heads	4 heads
Audio heads	2 heads
Tape speed	SP; 33.35 mm/s, EP; 11.12 mm/s
Tape format	VHS tape
Recording/playback time	SP; 120 min. with NV-T120
	EP; 360 min. with NV-T120
FF/REW time	Approx. 54 s. with NV-T120 (FF/REW)
	Approx. 36 s. with NV-T120 (JET REW)
VIDEO	
Television system	EIA; Standard (525 lines, 60 fields), NTSC color signal
Modulation system	Luminance; FM azimuth recording
	Color signal; converted subcarrier phase shift recording
Input level	VIDEO IN; 1 Vp-p, 75Ω
Output level	VIDEO OUT; 1 Vp-p, 75Ω
Antenna receive input	VHF 2-13 CH, 75Ω
	UHF 14-69 CH, 75Ω
	CATV 5A and A-5-EEE CH, 75Ω
AUDIO	
Input level	AUDIO IN (PHONO); -10 dBV, 47 kΩ
Output level	AUDIO OUT (PHONO); -8 dBV, 1 kΩ
Audio track	1 track (normal-mono only),
	2 channels (Hi-Fi sound stereo)
Video horizontal resolution	Color; more than 200 lines
Signal-to-Noise ratio	Video; more than 40 dB/SP
	Audio; more than 60 dB/Hi-Fi

Audio frequency response	20 Hz-20 kHz/Hi-Fi
Wow and flutter	0.005 %

■ FM TUNER SECTION

Frequency range	87.9 - 107.9 MHz (200-kHz step) 87.5 - 108.0 MHz (100-kHz step)
Sensitivity	2.5µV (IHF)
S/N 26 dB	2.2 µV
Antenna terminals	75 Ω (unbalanced)
Preset station	15

■ AM TUNER SECTION

Frequency range	520 -1710 kHz (10-kHz step)
AM Sensitivity S/N 20 dB at 1000 kHz	560 µV/m
Preset station	15

■ GENERAL

Power supply	AC 120 V, 60Hz
Power consumption	
Main unit	38 W
Active subwoofer (SB-WA822)	250 W
Dimensions (W x H x D)	430 x 105 x 352 mm (16-15/16” x 4-1/8” x 13-7/8”)
Mass	5 kg (11 lb.)

Power consumption in standby mode (when Demo function is off)

BRIGHT mode	Approx. 3.5 W (main unit) + 0.3 W (subwoofer)
DIM mode	Approx. 3.2 W (main unit) + 0.3 W (subwoofer)
OFF mode	Approx. 1.9 W (main unit) + 0.3 W (subwoofer)

■ SYSTEM

SC-HT822V (P)	Main unit: SA-HT822V (P) Satellie speaker: SB-HT822 (P) Active subwoofer: SB-WA822 (P)

■ SPEAKER

SB-HT822V (P)	Front and surround speaker: SB-FS822 (P) x 4 Center speaker: SB-PC822 (P) x 1

Notes:

1. Specifications are subject to change without notice.
   Mass and dimensions are aproximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to servi
or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

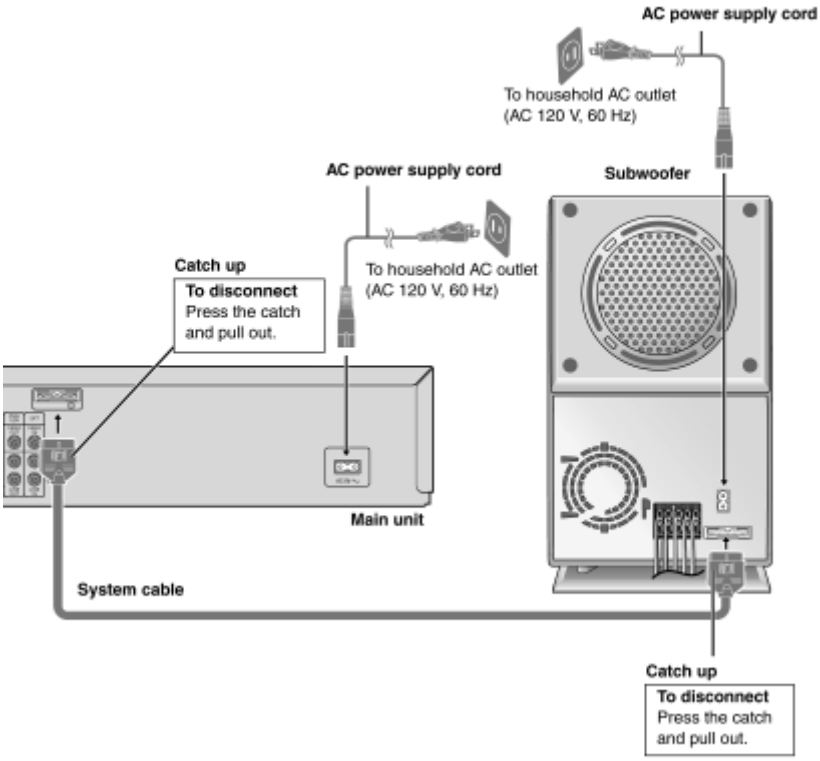
1 Powering Up of the Main Unit

1.1 Checking Player with Active Subwoofer

1. This unit uses the active subwoofer to supply the power of the component, and the active subwoofer should be connected to the component to check operational conditions of the component.
2. Connect both AC power supply cords to enjoy all the features of this system.

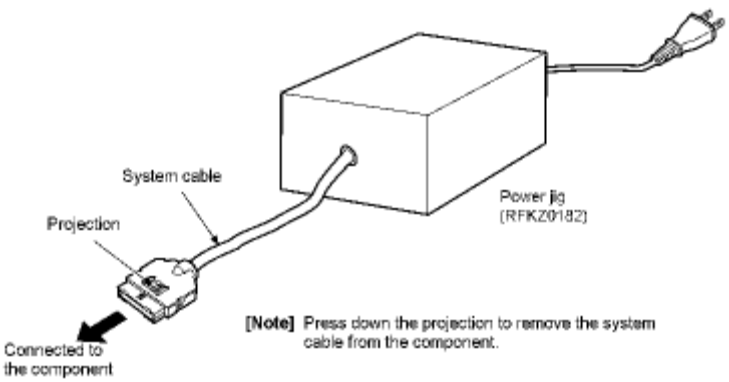
   This speakers and tuner will not work unless you connect the subwoofer to a household AC outlet.

Connect the AC power supply cords after all other connections are complete.



1.2 Using of Power Jig

1. If the active subwoofer is not available during to repair of the unit, use the following equipment.



Jig product number

RFKZ0182 (110V, 127V, 220V, 230V - 240V for for overseas domestic use)

2 Before Repair and Adjustment (Using Active Subwoofer Unit)

Disconnect AC power, discharge Power Supply Capacitors C546 , C547, C548 & C549 (from active subwoofer unit) through a 10 Ω, 1W resistor to ground.

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at AC 120V, 60Hz in NO SIGNAL mode should be ~1000 mA [From Active Subwoofer].

3 Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is switched ON.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are

shorted, or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlines below:

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

Note :

When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

4 Safety Precautions

4.1 General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

(This “Safety Precaution” is applied only in U.S.A.)

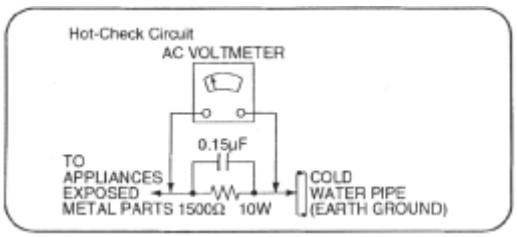
1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer’s recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

4.1.1 Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ.

   When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

Fig. 1



4.1.2 Leakage Current Hot Check (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15μF capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is out of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

4.1.3 Caution for fuse replacement

(For English)
CAUTION:

Replace with the same type fuse:
(Manufacturer: PICO ELECTRONICS (S) PTE LTD, Type: F1101, 1.6A, 125V)

(For Canadian French)
ATTENTION:

Utiliser un fusible de rechange de même type:
(Fabricant: PICO ELECTRONICS (S) PTE LTD, Type: F1101, 1.6A, 125V)

5 Handling the Lead-free Solder

5.1 About lead free solder (PbF)

Distinction of PbF P.C.B.:

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).
- Pb free solder will tend to splash when heated too high (about 1100°F/600°C).
- When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

6 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder remover device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

7 Accessories

Remote control

AC power supply cord

AM loop antenna

FM indoor antenna

Video cable

System cable

Antenna plug

Coaxial cable

Speaker cable stickers

8 Precaution of Laser Diode

CAUTION :

This unit utilizes a class 1 laser.

Invisible laser radiation is emitted from the optical pickup lens.

Wavelength: 658nm(DVD)/780nm(VCD/CD).

Maximum output radiation power from pickup: 100μW/VDE

When the unit is turned on :

1. Do not look directly into the pick up lens.
2. Do not use optical instruments to look at the pick up lens.
3. Do not adjust the preset variable resistor on the pickup lens.
4. Do not disassemble the optical pick up unit.
5. If the optical pick up is replaced, use the manufacturer's specified replacement pick up only.
6. Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Use of Caution Labels

(Inside of product)

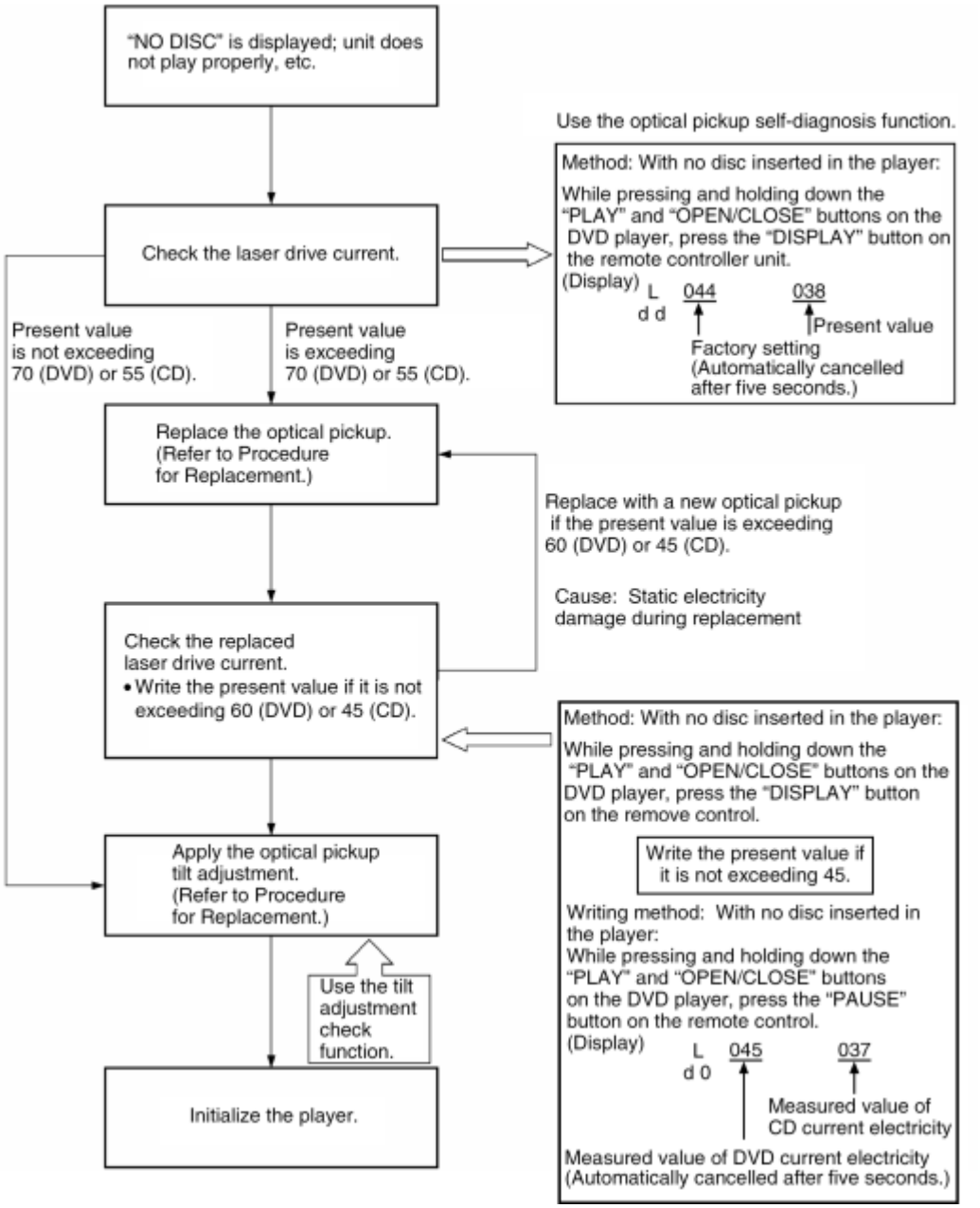
9 Optical Pickup Self-Diagnosis and Replacement Procedure (DVD Section)

9.1 Self-diagnosis

This unit is equipped with the optical pickup self-diagnosis function and the tilt adjustment check function. Follow the procedure described below during repair in order to perform self-diagnosis and tilt adjustment effectively. Especially when "NO DISC" is displayed, be sure to apply the self-diagnosis function before replacing with an optical pickup. Replacement of optical pickup generally requires when the present value of laser drive exceeds 55.

Note:

Start diagnosis within three minutes after turning on the power (as diagnosis fails when the unit becomes warm).


"NO DISC" is displayed; unit does not play properly, etc.
Use the optical pickup self-diagnosis function.
Method: With no disc inserted in the player:
While pressing and holding down the "PLAY" and "OPEN/CLOSE" buttons on the DVD player, press the "DISPLAY" button on the remote controller unit.
(Display) L d d 044 038
Present value
Factory setting (Automatically cancelled after five seconds.)
Check the laser drive current.
Present value is not exceeding 70 (DVD) or 55 (CD).
Present value is exceeding 70 (DVD) or 55 (CD).
Replace the optical pickup. (Refer to Procedure for Replacement.)
Replace with a new optical pickup if the present value is exceeding 60 (DVD) or 45 (CD).
Cause: Static electricity damage during replacement
Check the replaced laser drive current.
• Write the present value if it is not exceeding 60 (DVD) or 45 (CD).
Method: With no disc inserted in the player:
While pressing and holding down the "PLAY" and "OPEN/CLOSE" buttons on the DVD player, press the "DISPLAY" button on the remove control.
Write the present value if it is not exceeding 45.
Writing method: With no disc inserted in the player:
While pressing and holding down the "PLAY" and "OPEN/CLOSE" buttons on the DVD player, press the "PAUSE" button on the remote control.
(Display) L d 0 045 037
Measured value of CD current electricity
Measured value of DVD current electricity (Automatically cancelled after five seconds.)
Apply the optical pickup tilt adjustment. (Refer to Procedure for Replacement.)
Use the tilt adjustment check function.
Initialize the player.

9.2 Cautions to Be Taken During Replacement of Optical Pickup and Spindle Motor Assembly

Before replacing the optical pickup and spindle motor assembly, check a usage time respectively. Follow the checking method described below.

	Status and Key Function	Display
Checking CD laser usage time	With the unit stopped, press the "PLAY" button on the DVD player, the "FORWARD" button on VTR and the number "5" button on the remote controller unit at the same time.	10 XX YYYY yyyy = total time is displayed with a four-digit number by the ten hours.
Checking DVD laser usage time	With the unit stopped, press the "PLAY" button on the DVD player, the "FORWARD" button on VTR and the number "5" button on the remote controller unit at the same time.	10 XX YYYY xxxx = total time is displayed with a four-digit number by the ten hours.
	With the unit stopped, press the "PLAY" button on the DVD player, the "FORWARD" button on	T2_xxxx xxxx = total time is

Checking SP motor usage time	VTR and the number "6" button on the remote controller unit at the same time.	displayed with a four-digit number by the ten hours.
Resetting each usage time of DVD and CD lasers (simultaneous resetting) (Apply this operation before laser usage time checking mode is cancelled.)	While the unit stopped, press the "STOP" button on the DVD player, the "FORWARD" button on VTR and the number "5" button on the remote controller unit at the same time.	10 00 0000
Resetting SP motor usage time (Apply this operation before SP motor usage time checking mode is cancelled.)	While the unit stopped, press the "STOP" button on the DVD player, the "FORWARD" button on VTR and the number "6" button on the remote controller unit at the same time.	T2_0000

9.2.1 Cautions to be taken during replacement of optical pickup

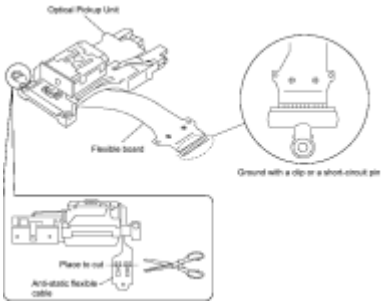
Optical pickup could be damaged due to the static electricity discharged from human body. Wear proper protection gear against static electricity during optical pickup and its peripheral repair. (Refer to the section regarding protection against static electricity.)

1. Do not touch laser diode, actuator and their peripherals.
2. Do not check laser diode with a tester and such. (The tester will be destroyed.)
3. For short-circuiting or removing laser diode, the use of an anti-static soldering iron is recommended.

   (Recommended model: HAKKO ESD product)
4. Solder the land of the flexible cable in the optical pickup.

Note:

- If an anti-static soldering iron is not available, short-circuit the terminal surface of the flexible cable and then the land using a clip or equivalent device.
- For short-circuit of the above laser diode, remove soldering as instructed in this manual after completing repair.



10 Self-Diagnosis Function and Service Mode

10.1 Self-Diagnosis Function (VTR Section)

10.1.1 Sef-Diagnosis Display

(Overview)

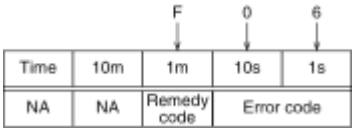
The details of failures detected in circuit or mechanism by the microcomputer will be automatically displayed on the FL display as the result of self diagnosis.

(Setting)

The details of a failure applicable to an error code are displayed on the minute, ten seconds, one second position of the FIP.

(Display)

FL display example:



(List of Remedy Code)

Remedy code	Remedy
U	User manageable
H	Should be managed by distributor
F	Should be managed at servicing center

(List of Error Code)

Display	Meaning	Automatic display	Memory
U11	Detection of head clogging-ups	O	O
U30	Remote controller mode error	O	X
H01	No initialization of cylinder due to no loading(Cylinder, driving circuit failure, etc.)	O	O
H02	No capstan FG at load position(Capstan, driving circuit failure, etc.)	O	O
F03	Mechanism locking not because of unloading, cassette up* Displayed when detected twice consecutively.	O	O
F04	Mechanism locking due to unloading* Displayed when detected twice consecutively.	O	O
F05	No S-reel pulse due to unloading(S-reel system, capstan system failure)	X	O
F06	Mechanism locking due to cassette up	O	O
F07	Recording circuit operation failure during REC operation	O	O
F08	Recording circuit operation failure not during REC operation	O	O
F15	No capstan FG when cassette is loaded(Capstan system, S-reel system failure)	X	O
H16	Cylinder lock detected during normal rotation	X	O
H17	S-reel lock detected during normal running	O	O
H18	T-reel lock detected during normal running	O	O
H80	EJECT mode when an error is detected	X	O
F2*	Error during PG automatic adjustment	O	O

10.1.2 Service Mode

(Service Mode and Service Data)

Number	Details	Meaning at Minute Position (Service Data 1)	Meaning of Second Position (Service Data 2)	Note
0	Service data	VCR mode (real time)	Processing number (real time)	
		Deck mode	Treatment during mechanism transition Control number	
1	Service data	Starting/End terminal detect information	Reception key information	Displayed only when the reception key button is ON.
		00 : Detection of neither starting or end terminal 01 : Detecting starting terminal 02 : Detecting end terminal 03 : Detecting both starting and end terminals	When the unit key or remote controller unit is used, the reception code is displayed.	
2	Service data	Mechanical position (real time)	Motor command (real time)	Because the mechanical operation is available without a tape, this mode accepts: No starting/end terminal detection No reel lock detection No judgment of tape quality and no position detection
		0L : EJECT position 02 : DOWN positions 03 : R-REW positions 04 : LOAD positions 05 : REV positions 06 : PLAY positions 07 : POFF positions 08 : STOP positions 09 : STOP positions 0- : FFREW positions 0_ : Middle of positions	0*, 2* : CYL off Cap off 1* : CYL off Cap on (fwd) 3* : CYL off Cap ON (rev) 8*, U* : CYL on Cap off 9* : CYL on Cap on (fwd) A* : CYL on Cap ON (rev) *0 : Moter off *1 : Loading *2 : Un Loading *3 : Break (Load + Unload)	
3	Self diagnosis history (1st time)	Error code of History 1	Additional information 1 and 2 of History 1	
4	Self diagnosis history (2nd time)	Error code of History 2	Additional information 1 and 2 of History 2	
5	Self diagnosis history (3rd time)	Error code of History 3	Additional information 1 and 2 of History 3	
6	Service data	Cylinder ON command	Cap motor ON/OFF and forward/reverse rotation command	Same as the details numbered as 5 and 6 of previous service mode.
7	Manual operation	Real timeMechanical position	Real timeMotor command	PLAY button ON: loading direction STOP button ON: Unloading direction
		Same as the details of Service 2	Same as the details of Service 2	

10.1.3 Service Mode Display

(Overview)

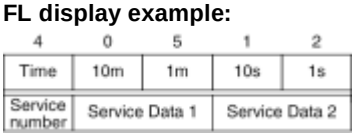
A part of the microcomputer internal information is displayed on the FL in order to ease servicing during sales.

(Setting)

Press and hold down the FF and EJECT buttons for at least three seconds to enter the service mode. As this operation is repeated, service number changes starting at 0 up to 7, and then counter (clock) is displayed.

(Display)

FL display example:



10.1.4 Self-Diagnosis History Memory Function

(Memory Setting of Self-Diagnosis History)

1. Memorizes the self-diagnosis result and the additional data at the moment when an error is detected.
2. History is numbered up to three. The latest error always appears first, shifting the old ones as two and three.
3. Other data that cannot be fit within three histories are discarded.
4. The same error is not memorized.

(Resetting Self-Diagnosis History)

Press and hold down the FF and EJECT keys at the same time at least 5 seconds to reset the data. (Be sure to apply

this operation after repair.)

(Display of Self-Diagnosis History)

The self-diagnosis history and additional data will be displayed on the FL, using numbers 3 to 5 of the service mode.

FL display example:

Time	10m	1m	10s	1s
Service number	Error Code		Additional Data	
3	Error Code of history 1		Additional data 1 of history 1	Additional data 2 of history 1
4	Error Code of history 2		Additional data 1 of history 2	Additional data 2 of history 2
5	Error Code of history 3		Additional data 1 of history 3	Additional data 2 of history 3

By selecting 3, 4 or 5 of the service mode, error code and additional data of history 1, history 2, and history 3 are displayed respectively.

When no error code is memorized, "-" will appear as error code and additional data.

10.1.5 Self-Diagnosis History Memory

(Overview)

The self-diagnosis history memory function stores up to three errors historically, which of each occurs consecutively, and also additional data such as deck mode and mechanism position along with error code for the purpose of speedy solution of a problem.

(Error code and additional data)

Following table shows additional data applicable to error code.

Error code	Meaning	Additional data			
		Data 1	Data 2	Data 3	Data 4
01	No initialization of cylinder due to no loading (Cylinder, driving circuit failure, etc.)	VCR mode	-	Tape position	None
02	No capstan FG at load position (Capstan, driving circuit, etc. failure)	VCR mode	-	Tape position	FG count
03	Mechanism locking not because of unloading, cassette up	VCR mode	Standby position	Tape position	LM information
04	Mechanism locking due to unloading	VCR mode	-	Tape position	LM information
05	No S-reel pulse due to unloading (S-reel system, capstan system failure)	VCR mode	Tape position	Tape position	LM information
06	Mechanism locking due to cassette up	VCR mode	Standby position	Tape position	LM information
07	Recording circuit operation failure during REC operation	VCR mode	-	Tape position	None
08	Recording circuit operation failure not during REC operation	VCR mode	-	Tape position	None
11	Detection of head clogging-ups	VCR mode	-	Tape position	None
15	No S-reel pulse when cassette is loaded (Capstan system, S-reel system failure)	VCR mode	S-reel pulse counting value	Tape position	None
16	Cylinder lock detected during normal rotation	VCR mode	Processing number	Tape position	None
17	S-reel lock detected during normal running	VCR mode	Processing number	Tape position	FG count
18	T-reel lock detected during normal running	VCR mode	Processing number	Tape position	FG count
80	EJECT mode when an error is detected	VCR mode	*1	Tape position	None
2*	Error during PG automatic adjustment	VCR mode	-	Tape position	None

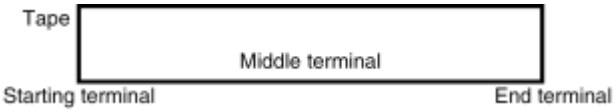
(Meaning of Additional data, (Data 1), VCR mode)

0 : STOP, 1 : EJECT, 2 : REW 3 : FF, 4 : REV, 5 : CUE, 6 : SLOW 7 : POWER OFF, 8 : PLAY, 9 : STILL, U : REC, A : REC PAUSE, - : ADUB, N : ADUB PAUSE, L : INSERT, NONE DISPLAYED : INSERT PAUSE

(Meaning of Additional data, (Data 2), Tape position)

Type of tape	Criterion of tape position between starting and end terminals

T-90 or above (Thin Hub)	Between starting terminal: L and end terminal: 1 with fourteen levels of change
T-60 or below (Thick Hub)	Between starting terminal: U and end terminal: 5 with sic levels of change



(Data 2 display)

Thin Hub	L n -- A u 9 8 7 6 5 4 3 2 1
Thick Hub	U 9 8 7 6 5

***1 (Additional data, (Data 2)) (EJECT reason)**

Data 2	Reason
1	Loading completed when no tape is loaded. (spinning)
2	S-photo, S-reel, or Cap system failure during down short REW operation
3	Mechanism locking during loading
4	L both terminals detected when loading starts

***Additional data 3 and 4**

While the self-diagnosis history is displayed, press the STOP button (on the unit or the remote controller unit) to switch between Additional data 3 and 4.

A : Service mode number
B : Additional data 3...mechanical processing transition NO
C : Additional data 4...LM (Loading Motor) information

4 12 02
(Meaning) : When EJECT button is pressed, the loading motor is turned on but a problem occurs during transition from REV through LOAD.

(Additional data 3) (Mechanical process transition NO)

(EJECT)	(P ON)
10 : PLAY→REV passing11 : REV passing12 : REV passing→LOAD (Capstan stop)13 : LOAD→DOWN14 : DOWN→EJECT15 : EJECT completed	None displayed: Power ON treatment
	(P OFF)
	70 : PLAY→P OFF
(FF)	(REW)
U0 : PLAY→STOP FU1 : STOP F→FFU2 : FF initialization	A0 : PLAY→STOP FA1 : STOP F→REWA2 : REW initialization
(PLAY)	(STILL)
20 : Cylinder initialization, phase drawing21 : Audio mute, W switch	40 : Forward rotation, REC signal off41 : Speed 0, Capstan Off
(REC)	(STILL→PLAY)
30 : Cylinder initialization, phase drawing31 : REC signal output	48 : Tape forwarding
(CUE→PLAY)	(REV)
4A : End terminal check, tape forwarding4- : PLAY check, tape forwarding	80 : PLAY→P OFF81 : Rewind82 : P OFF→REV
(CUE)	
49 : Double speed forwarding, remaining computation jump	

(Additional data 4) (LM information)

By loading motor driving request

No change in mechanical position: 1 (loading motor OFF)

Some change in mechanical position: 2 (loading motor ON)

10.2 Self-Diagnosis Function (DVD Section)

10.2.1 Self-Diagnosis Display

(Overview)

The details of failures detected in circuit or mechanism by the microcomputer will be automatically displayed on the FL display as the result of self diagnosis.

(Setting)

1. Power-up the unit.
2. Set to “CD/DVD” mode using [INPUT SELECTOR] button on main or [DVD] button on the remote control (Ensure no disc is placed in the tray.)
3. Press & hold [STOP] button on main unit follow by [INPUT SELECTOR] for 2s. It enters into self-diagnostic mode.
4. Press [POWER] on main unit to exit this mode.
5. Press [STOP] to display if there is other error codes.

The details of a failure applicable to an error code will be displayed on the FL display.

(Display)

FL display example: [----T--H05]

(List of Error Code)

Display	Type of error	Description
U 11	Focus error	
H 01	Tray loading error	
H 02	Spindle servo error	Spindle servo, DSC, SP motor, CLV servo error
H 03	Traverse motor error	
H 04	Tracking servo error	
H 05	SEEK time-out error	
H 15	Open SW error	It is memorized if there is abnormal SW while operating, and is fail-save operation, and an abnormal content is displayed by the self-diagnostic mode usually. Abnormal SW is detected in the abnormal detection mode.
H 16	Close SW error	
CD F 28	DISC loading error	During the horizontal motion toward to PLAY position, if there is no change when it exceeds the fail safe timer or if counter direction does not enter into state of target, will be keep it memory mode. Initialization is done when the next mecha mode starts. Only when backup data is cleared of this error no. when it compels clearly or power supply start-up.
CD F 29	DISC unloading error	During the horizontal motion toward opposite direction to PLAY position, if there is no change when it exceeds the fail safe timer or if counter direction does not enter into state of target, will be keep it memory mode. Initialization is done when the next mecha mode starts. Only when backup data is cleared of this error no. when it compels clearly or power supply start-up.
CD F 27	DOWN SW error	Memory when bottom switch is not changed even if it exceeds it to time of fail safe timer when going up and down operates toward bottom position. When mechanism begins to operate next time, initialization is done. Only when backup data is cleared clearly of this error No. when it compels clearly or power supply start-up.
CD F 22	Mechanism is loading motor/abnormal	Memory at the initialization of mechanism due to abnormality of the loading motor or the mechanism when entering the state usually cannot. When mechanism begins to operate next time, initialization is done. Only when backup data is cleared clearly of this error No. when it compels clearly or power supply start-up.
F 03	Traverse servo error	
F 04	Tracking servo error	
F 05	Seek error	
F 06	Power supply error	Power cannot be turned off due to communication error between panel computer and system computer.
F 61	Power supply error	Abnormal output or power supply abnormal circuit of Power Amp.

10.2.2 Error Code Display

1. Set to CD/DVD mode (Ensure no disc is loaded)
2. While pressing and holding down the [STOP] on main unit and press [0] on remote control in order to display the latest error code. (Automatically cancelled after five seconds.)

Note: No error code will show if there is no problem with unit. Refer below for error code display.

(Error Code Display)

Section	Code	Meaning	Note
Disc code	F103	Illegal Highlight Position	Possibility of illegal disc when highlight is displayed
Decoder related	F220	Y level adjustment failure	Brightness signal level adjustment cannot be properly operated
	F221	C level adjustment failure	Color signal level adjustment cannot be properly operated
II C error	F4FF	Compulsory initialization failure (time out)	
DSC related	F500	DSC error	DSC stops due to servo failure. (Startup, focus failure, etc.)
	F501	DSC not ready	Communication failure between DSC and system computer (No communication because DSC does not move)
	F502	DSC time out failure	See F500.
	F503	DSC communication failure	Communication failure (Result failure occurs after communication command is transmitted.)
	F504	Data slice offset adjustment failure	Not in use. (FEP error)
	F505	DSC Attention Error	See F500.
	F506	Invalid media	Disc is placed upside down; TOC is unreadable or invalid disc is inserted.
ODC related	F600	Control information unattainable due to demodulation error	Operation stops because navigation data cannot be obtained due to demodulation system failure.
	F601	Unknown sector ID requested	Operation stops because access of illegal ID data is requested.
	F602	LEAD-IN unattainable due to demodulation error	Unable to read LEAD IN data
	F603	KEYDET unattainable due to demodulation error	Unable to obtain CSS data
	F610	ODC failure	No permission of command issue
	F611	6626 QCODE don t read ERROR	Unable to obtain seek address at CD system
	F612	No CRC OK during a certain time of duration	Unable to obtain ID data at DVD system
	F630	No response to KEY DET makeshift	(Internal use)
	F631	CPPM KEY DET unavailable to FILE end terminal	CPPM fail system cannot be read due to scratch.
	F632	CPPM KEY DET unavailable	Revoke or altered.
Microcomputer error	F700	MBX overflow	When replying a message to Disc Manager. (operation continues)
	F701	Message command incomplete	A message is issued before replying to Disc Manager.
	F702	Message command changed	A message is issued before replying to Disc Manager.
	F710	AD conversion at AN0 incomplete	Conversion cannot be complete within a designated time during check of AD conversion before Y/C automatic adjustment.
	F711	AD conversion at AN1 incomplete	Conversion cannot be complete within a designated time during check of AD conversion before Y/C automatic adjustment.
	F712	AD conversion at AN0 dispersed	Conversion result exceeds standards while a designated value is set during check of AD conversion before Y/C automatic adjustment.
	F713	AD conversion at AN1 dispersed	Conversion result exceeds standards while a designated value is set during check of AD conversion before Y/C automatic adjustment.
	F720	DA conversion at AN0 unchangeable	Conversion result exceeds standards while a designated value is set during check of AD conversion before Y/C automatic adjustment.
	F721	DA conversion at AN1 unchangeable	Conversion result exceeds standards while a designated value is set during check of AD conversion before Y/C automatic adjustment.
	F880	Unsuitable task number	When a message arrives from not existing task (error stops)
	F890	A message is sent during AV task transmission	During transmission of a message to AV task (error stops)

	F891	Unable to transmit a message to AV task	When a message starts transmission to AV task (error stops)
	F893	FLASH ROM altered	Content of FLASH ROM change
	F894	EEPROM failure	EEPROM Promlem
	F895	PERR JMP MI SMUCH	Firm device incompatible (non-conformant destination value)
	F896	PERR JMP NON	Firm device incompatible (non existing jumper)
	F897	PERR NO INIT	Initialization incomplete
	F8A0	Unsuitable message command	When a message starts transmission to AV task (error stops)

10.3 Self-Diagnosis Function and Service Mode

Improvement of Self-Diagnosis FunctionPrevious self-diagnosis function of DVD player has been improved as follows:

Existing type	New type	
UHF error display Latest error memory function n=1	UHF error display Latest error memory function n=20	Memory storage upgraded
Jitter/read error display	Jitter read error display Focus driving value display	Displays current electricity level of focus driving
Laser current electricity display for use of DVD	Laser current electricity display for use of DVD and CD	
	ADSC internal RAM display	Displays servo learning value stored inside ADSC (servo controller) IC RAM
	Servo process display	Displays an initialization process assigned to each servo process number for the steps taken especially during initialization of player boot.
	Total usage time display SP motor Laser (DVD/CD)	Displays usage time of each SP motor and laser (DVD/CD).

10.4 Mode Table

Following modes are available with combinations of the pressed buttons on the player and on the remote control.

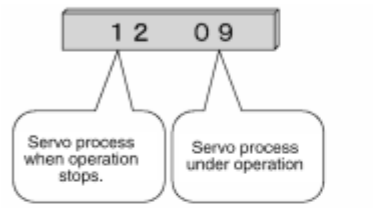
Item	Operational Condition and Key Function	Details	Display	To Exit Mode
Jitter display	While the DVD player is stop, press and hold down the STOP button on the DVD player and the number "5" button on the remote controller unit.	Jitter display Measures and displays jitter value. Measurement is repeated every second. Read error counter starts at 0 at the mode setting, and increased by one as data read fails at target block.	J 081 001 Measured jitter value Region number	Press the STOP button.
Error code display	During "" mode, press and hold down the STOP button on the DVD player and the number "0" button on the remote controller unit. * By moving up and down the displayed cursor, panel computer changes history number and re-issues a command.	Error code display Displays the latest error code stored in EEPROM	* Refer to the section regarding error code display.	Automatically cancelled after five seconds.
Laser driving current electricity level writing	While no disc is loaded, press and hold down the STOP button on the DVD player and the PAUSE button on the remote controller unit.	Writes laser driving current electricity level. Stores each initialization value of DVD and CD in EEPROM.	L 040 034 d o Measured DVD current electricity value Measured CD current electricity value The above example shows that the initial current electricity level is 40mA for DVD laser and 34mA for CD laser when laser is turned on.	Automatically cancelled after five seconds.
Measurement of DVD laser current electricity	While no disc is loaded, press and hold down the STOP button on the DVD player and the DISPLAY button on the remote controller unit.	Measurement of DVD laser current electricity Measures DVD laser current electricity and displays the result together with the initialization value stored in EEPROM. After measurement, DVD laser is lit till the power is turned off.	L 043 038 d d Current electricity initialization value stored in EEPROM Present current electricity The above example shows that the current electricity initialization value is 43mA when laser is turned on.	Automatically cancelled after five seconds.
ADSC internal RAM display	During "" mode, press and hold down the STOP button on the DVD player and the RETURN" on the remote controller unit.	ADSC internal RAM display Reads and displays the RAM value inside ADSC. The address is renewed when the CLEAR key is pressed so that the values at eleven points appear.	A1 140 200 Address RAM value at displayed address	Press the STOP button.
Servo process display	While no disc is inserted, press and hold down the PLAY button on the DVD player and the FORWARD button on VTR and the number "7" button on the remote controller unit.	Servo process display Displays the servo process from stop to access.	*Refer to the servo process flowchart.	Turn off the power.
Measurement of CD laser current electricity	While no disc is loaded, press and hold down the PLAY button on the DVD player, the FORWARD button on VTR and the DISPLAY button on the remote controller.	Measurement of CD laser current electricity Measures CD laser current electricity and displays the result together with the initialization value stored in EEPROM. After measurement, CD laser is lit till the power is turned off.	LD C0 38 041 Present current electricity value Current electricity initialization value stored in EEPROM	Automatically cancelled after five seconds.
Version display	While no disc is loaded, press the STOP button on the DVD player and the number "7" button on the remote controller unit.	Version display	22 01 65 C 185 Generation Type of device Release number	Automatically cancelled after five seconds.
FL all lit	During "" mode, press the STOP button on the DVD player and the number "9" button on the remote controller unit.	FL all lit	Check that all FL are lit.	Turn off the power.
Dealers lock	When no disc is loaded, press the STOP button on the DVD player and the POWER button on the remote controller unit.	Dealers lockSwitches ON/OFF.During dealers lock mode, tray cannot be opened when the power is turned off.	"LOCKED" is displayed when the power is off and the tray is opened during dealers lock is activated.	Press the same buttons used for activation in the same manner.
User initialization	When no disc is loaded, press and hold down the STOP button on the DVD player and the ≥10 button for at least three seconds.	User initializationThe user setting recovers the factory setting.	(INITIALIZED)	None

Item	Operational Condition and Key Function	Details	Display	To Exit Mode
Region display	When no disc is loaded, press the STOP button on the DVD player and the number "6" button on the remote controller unit.	Region display	2 N N 242 Operation computer jumper information N : NTSC, 6 : PAL60 N : nonPAL, P : PAL Read error counter value	Automatically cancelled after five seconds.
CD/DVD laser usage time check	When no disc is loaded, press the STOP button on the DVD player, and the number "A" button on the remote controller unit.	CD/DVD laser usage time checkMeasures a time for CD and DVD respectively.	10 00 016 028 CD laser time DVD laser time	Automatically cancelled after five seconds.
CD/DVD laser usage time reset	When no disc is loaded, press the STOP button on the DVD player, and the number "v" button on the remote controller unit.	CD/DVD laser usage time resetResets usage times of CD/DVD simultaneously.	10 00 000 000	Automatically cancelled after five seconds.
SP motor usage time check	When no disc is loaded, press the STOP button on the DVD player, and the number ">" button on the remote controller unit.	Checks SP motor usage time.	T2 1234 SP motor usage time	Automatically cancelled after five seconds.
SP motor usage time reset	When no disc is loaded, press the STOP button on the DVD player, and the number "<" button on the remote controller unit.	Resets SP motor usage time.	T2 0000	Automatically cancelled after five seconds.

10.5 Servo Process Flowchart

"Display Method" When no disc is loaded, press the PLAY button on the DVD player, the FF button on VTR, and the number "7" button on the remote controller unit.

Display Details of Servo Process during Initialization



(Restrictions)
Not all the currently progressing process can be displayed due to processing time.

"To Exit"
Turn off the power.

Initialization flow	Range applicable to servo process number	Number	Treatment Item Meaning
START			
Initialization setting Tray control	00	00	Individual initialization setting
TRV initialization movement	01	01	TRV initialization movement
Detection of disc loaded/unloaded	02 ~ 08	02	Initialization setting of FE system
		05	Detection of LD ON HALF loaded/unloaded
		08	Detection of CD LD ON loaded/unloaded
Detection of disc type	09 ~ 0C	09	SPM initialization
Focus servo	10 ~ 13	12	Focus ON
		13	FBAL adjustment
Tracking servo	14 ~ 15	15	Tracking ON
Gain learning	17	17	Gain adjustment of ADSC focus system
ID lead	18 ~ 1A	19	Adjustment of DBAL/ equalizer etc.
		1A	ID lead

10.6 Servo Process Display Mode

Each step can be monitored by a number assigned to each servo process during player initialization.Following table shows each process applicable to displayed numbers.

Number Assigned to Servo Process

Processing Type	Processing Item	Details	Processing number
Initialization	Initialization	Operated after tray is loaded. (Transit to READY or PREPARE mode.)	0 ~ 4F
	Secondary learning	Performs servo learning for L1 layer of DVD-DL and 1 single speed of CD-DA.	50 ~ 7F
Re-initialization	Re-initialization	Each servo is turned on at READY mode by user.	80 ~ 9F
Seek	Seek	Optical pickup is moved to a designated position on the disc.	A0 ~ BF
Recovery	Recovery		
	(Error check)	Search during PLAY/SEEK mode	C0 ~ C4
	(Action)	Error recovery according to attention error interruption sent from S-ODC.	C5 ~ C9
	(Q-code read)	Reset and retry when Q-code cannot be read.	CA ~ CF
Stop	Stop	Disc operation completely stops as servo down according to user s operation.	F0 ~ FF

10.7 ADSC internal RAM display

Displays servo learning values of ADSC internal RAM as servo processor.Used for judging the quality of servo operation, disc, and OPU. Followings are commonly displayed addresses:

Address	Meaning
4B4	Focus gain learning value of DVD-S, DVD-D (LO), CD and VCD
4BC	Focus gain learning value of DVD-D (L1)
4B6	Focus balance learning value of DVD-S, DVD-D (LO), CD and VCD
4BE	Focus balance learning value of DVD-D (L1)
4B5	Tracking gain learning value of DVD-S, DVD-D (LO), CD and VCD
4BD	Tracking gain learning value of DVD-D (L1)
TB0	Tracking balance learning value of DVD-S, DVD-D (LO), CD and VCD
TB1	Tracking balance learning value of DVD-D (L1)
DBD	DSL offset learning value of DVD-S and DVD-D
DBC	DSL offset learning value of CD and VCD
FC0	Equalizer FC value of DVD-S, DVD-D (LO), CD and VCD
BT0	Equalizer BOOST value of DVD-S, DVD-D (LO), CD and VCD
FC1	Equalizer FC value of DVD-D (L1)
BTI	Equalizer BOOST value of DVD-D (L1)

10.8 Lock Function

This function prohibits removal of disc and some disc operations to prevent loss of disc at a shop during sales promotion or equivalent occasions. While this function is activated, the player displays "LOCKED" if any button is touched.

10.8.1 Setting

While pressing and holding down the "STOP" key on the unit, press the POWER button on the remote controller unit to activate. (The message, "LOCKED" appears when the function is activated.)

10.8.2 Exiting Lock Function

While the lock function is activated, press the buttons which are used to enter the mode in the same manner. (When the lock function is deactivated, the message, "UNLOCKED" appears.) (This function cannot be cancelled even when the power is turned off.)

10.9 Cautions To Be Taken During Servicing

10.9.1 Recovery Process after Repair of DVD Player

When DVD Module 2 P.C.B and/or FLASH ROM, EEPROM, etc. inside DVD Module 2 P.C.B, apply the recovery operation in order to optimize the new drive. Use the following disc so that the operation starts automatically.
Recovery disc (product number=RFKZD03R005)

Note:

Previously required initialization after repair of DVD player is no longer necessary. After completing the recovery process, the user s setting is replaced with factory setting like user initialization. Therefore, record the user s setting before repair in order to restore it after applying the recovery process.

10.9.2 DVD Player Firmware Version Upgrade Process

Firmware of DVD player may upgrade to conform to improvement of its performance and quality including operational range, playability of non-standardized discs, etc. The version upgrade disc contains the recovery function, and the recovery disc is not necessary.

Note:

Version upgrade process cannot be complete if the AC power is cut off due to power failure and other occasions during the process. If this occurs, replace FLASH ROM and restart version upgrade. Version upgrade disc number is informed when ordered.

10.10 Operation after Completion of Repair

Follow the steps described below after completion of repair.

10.10.1 Steps

While the power is turned on:

1. Close the tray using the OPEN/CLOSE button.
2. Turn off the power using the POWER button.
3. Unplug the power outlet.

10.10.2 Precaution Note (Important)

Do not unplug the power outlet while the tray is open, and do not close the tray manually.

10.11 CR16 Mechanism Ageing Mode (Addition)

To enter into ageing mode :

1. Enter self-diagnostic mode. (Doctor Mode)
2. Press [3] button on remote control. It enters into ageing mode. (See below for ageing process)

Ageing process

1. Tray 1 open.
2. It waits for one second (Note : Do not put any disc into the tray)
3. Tray 1 close.
4. TOC READ (Reading incomplete)
5. Tray 2 open & repeat process 1 to 4. (Process repeat until Tray 5)
6. Tray check.
7. Whole process complete (Counter on FL increase by 1)

Note : To exit ageing mode, press [POWER] button. The unit will power down. Do not unplug the power cord until FL display shows " GOODBYE ". This is to avoid tray jam problem.

Display Example : [0 0 0 0 0 T 3 O P] ...TRAY OPEN
[0 0 0 0 0 T 3 C L] ...TRAY CLOSE
[0 0 0 0 0 T 3 R E] ...TOC READING
[0 0 0 0 0 T 3 C H] ...TRAY CHANGING

10.12 Clearing Of Error Code (Addition)

1. Enter into self-diagnostic mode
2. Press & hold [STOP] for 5 secords or more.

11 CHECKING POINTS FOR SYS COM TIMER MY-COM (IC6001) (VIDEO)

11.1 Points to check when replacing

When the replacing the Sys Com Timer My-Com (IC6001), surely check the contents of data of a microcomputer before replacing. When the Program Navi is "ON", take backup before replacing and set the initial value. *It also carries out at the time of replacing the P.C.B

(The procedure)

1. Before replacing IC6001, please record and keep the channel of already set-up TV broadcast. The backup of the program navi is also required since IC6001 already stores the program navi data. Please surely take the backup when the navi data is "ON".

   *The procedure of checking the program navi data without a cassette.

   1. Press both "EJECT" and "FF" buttons in the same time for 3 seconds and start the Service Mode.
   2. Push the button of program navi on the remote controller for 5 seconds.
   3. The program navi data is shown on the monitor.
   1.
2. After replacing IC6001, switch on the power supply of the VIDEO.
3. Short out TL6002 and TL6004 on the main P.C.B by short jumper.
4. Initialise the Sys Com Timer My-Com as below.
5. After that, short out the TL7501 and TL7502 on the main P.C.B. by short jumper twice to make the factory setting. (Unless carrying out the Factory Setting, the indication of the line-in doesn t appear on the FIP panel).
6. After carrying out the procedure 1. to 5. as above please adjust the PG shifter.

11.2 Initial setting when replacing My-com.

1. Initial setting is an important function in order to guarantee as a product correctly. Unless it inputs the number according to the model, it cannot operate correctly.
2. Once the initial-setting value set up, even if a microcomputer (IC6001) is reset, it has memorized.
3. Be sure to set the initial-setting value when replacing the main P.C.B. with a microcomputer (IC6001).
4. The RAM inside of the microcomputer (IC6001) stores the PG self-adjustment. Be sure to do the PG self-adjustment when the Sys Com Timer My-Com, the P.C.B. with microcomputer, and cylinder unit are replaced.

11.3 Initial figure (#) setting procedure

① Set the service mode No: 2 by setting service mode.

Push EJECT button and FF button in the same time → set the service mode No: 2

DISPLAY

2 00 00

② Set the Initial setting Input Mode.

Push EJECT button for more than 3 seconds → set the initial setting Input Mode

DISPLAY

2 00

③ Set the Adjustment No: 2.

Push the channel UP Λ button twice → set the Adjustment No: 2

DISPLAY

2 2 00

④ Set the Initial-Setting Value Mode.

Push the Power Supply button → set the Initial-Setting Valume Mode

DISPLAY ...figures of the replaced
00 30 micro computer
(number)

⑤ Set the Initial-Setting Value Mode by these button.

REW button	No, of the fourth digit	By using these buttons Set the numbers 2256 on the display	DISPLAY 2256 2010
PLAY button	No, of the third digit		
STOP button	No, of the second digit		
FF button	No, of the first digit		

⑥ Finish the Initial setting.

Push the Power Supply button → Finish the Initial-Settinge

DISPLAY
2 2 00

⑦ Clear the Service Mode.

Push the EJECT button and then FF button in order. → Clear the Service Mode
Set the Normal Mode

DISPLAY
00 : 00 . ...CLOCK DISPLAY

Caution:

When using the service mode, please be sure to plug in and plugout once (for resetting) after clearing the service mode and setting the normal mode.

12 Adjustment Procedure (DVD Section)

12.1 Required Tools and Equipment

Purpose of Use	Tools/Equipment	Model/Product Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	TORX screw driver (T6)	Available on sales route. (T6) or RFKZ0185
Others	Hanarl	VFK1784
	Grease	RFKXPG641
	Drysurf	RFKXGUD24
Checking	CD test disc	PVCD-K06 and any commercially available disc
	VCD test disc	PVCD-K06 and any commercially available disc
	Recovery disc	RFKZD03R005

12.2 Necessity of Adjustment

12.2.1 Necessity of Optical Adjustment

- Before starting optical system adjustment, be sure to wear proper protection gear against static electricity.
- Optical adjustment (optical pickup tilt adjustment) is required after following parts are replaced:

1. Optical pickup
2. Spindle motor assembly
3. Optical pickup peripherals such as a rail, etc.

Note:

Optical adjustment is not necessary after replacement of other parts inside traverse, however, may require when picture deterioration is detected. Optical adjustment cannot be applied to the inside of optical pickup. When a traverse unit is replaced, the adjustment is not necessary.

12.2.2 Necessity of Electrical Adjustment

- Follow the procedure for adjustment.

12.3 Storing and Handling Test Discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

1. Do not leave the discs uncovered on the work desk or other places after use.
2. Handle the discs carefully to prevent scratches. Put each disc in its case and place it in the standing position. Store the discs in a cool place and avoid direct sunlight or air conditioner.
3. Accurate adjustment cannot be expected with a disc warped against a flat surface. Obtain a new test disc for optical adjustment.
4. If a warped disc is used, adjustment would result incorrectly, and other discs could not be used.

12.4 Optical Adjustment (Optical Pickup Tilt Adjustment)

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw	T1 (inner track) play	

	Tilt adjustment screw	T30 (central periphery) play T43 (outer track) play	DVDT-S15 or DVDT-S01
Measuring equipment		Adjustment value	
None (LCD display of the player is used.)		Adjust that jitter value becomes minimum.	

12.4.1 Optical Adjustment (Optical Pickup Tilt Adjustment)

1. While the player is stopped and no disc is inserted, select the DVD function. Press and hold down the ■ button on the player and the number button, “5” on the remote controller unit.

2. Check that “J_xxx_yyy_zz” is appearing on the display.

   For your information:

   The values, “yyy” and “zz” are not associated to jitter value.

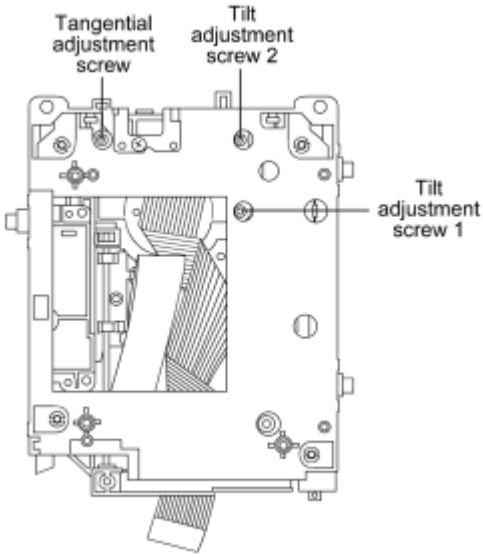
   “yyy” indicates the frequency of error occurrence.

   “zz” indicates the focus drive value.

   Note:

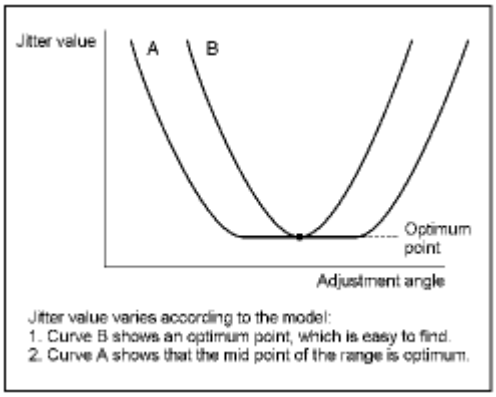
   Jitter value appears on the display.
3. Play test disc T30 (central periphery).
4. Adjust till the jitter value becomes minimum, using a tangential adjustment screw. (Fig. 12-1)
5. Play test disc T30 (central periphery).
6. Adjust till the jitter value becomes minimum, using a tilt adjustment screw 1. (Fig. 12-1)
7. Play test disc T30 (central periphery).
8. Adjust till the jitter value becomes minimum, using a tilt adjustment screw 2.(Fig. 12-1)
9. Adjust till the jitter value becomes, using the tilt adjustment screws 1 and 2 alternatively.
10. Finally please reproduce T01 (inner priphery) and T43 (outer periphery) and check the jitter value. (Please readjust, when the jitter value is extremely different.)

Fig. 12-1



12.4.2 Tips

1. Apply the tangential adjustment first and then the tilt adjustment.
2. Repeat the adjustment a couple of times to find the optimum point.
3. Complete with the tilt adjustment.


Jitter value
A
B
Optimum point
Adjustment angle
Jitter value varies according to the model:
1. Curve B shows an optimum point, which is easy to find.
2. Curve A shows that the mid point of the range is optimum.

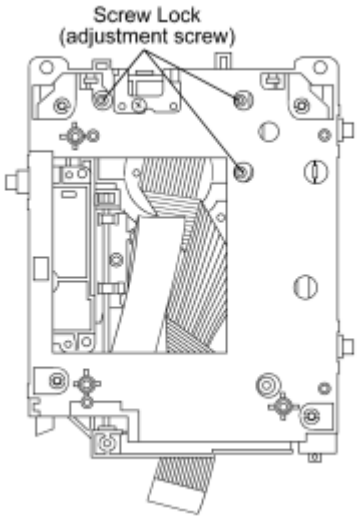
12.4.3 Check After Adjustment

Replay test discs or other commercial discs in order to confirm that no picture deterioration or sound skipping is detected in the inner, middle, and outer tracks. After this, fasten each adjustment screw securely using a screw lock.

12.4.4 Procedure for Screw Lock

1. After adjustment, remove the top cover, clamper base, disc tray and then traverse unit.
2. Place the traverse unit upside down, and fasten the adjustment screws with a screw lock. (Fig. 12.2)
3. After fastening the screws, assemble in order of the traverse unit, disc tray, clamper base, and then top cover.

Fig. 12-2



13 Operation Procedure

14 Disc information

15 About HighMAT

15.1 What is HighMAT?

This word combines the abbreviations of Matsushita Electric Industrial Co., Ltd. and High Performance Media Access Technology, and is a trademark of Microsoft Corporation. The products with the HighMAT logo shown below are made according to the HighMAT standard.

HighMat is a format that allows users to save digital contents such as photographs, audio and images on a CD. This gives consistency in the way of reading data when general consumer products (such as DVD players) and PCs are used, and thus, it is easy to operate for the user.

15.2 Why use HighMAT?

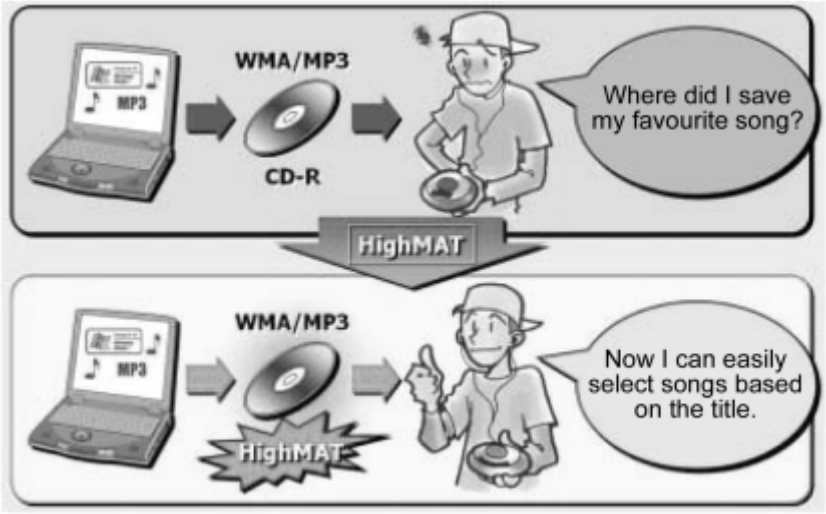
Up to now, there was no harmonized standard from playing digital content stored in CD-ROM formats (including CD-R) on consumer products like DVD players. Therefore, we used to have problems such as follow:

- There was no common play list or attached information on contents, which is called metadata.
- The data compression method differed according to the equipment.
- As the number of CD-ROMs recorded increased retrieved the contents became more difficult.
- Because display and operation methods were different depending on the equipment, the play order of the content on the same disc could change.

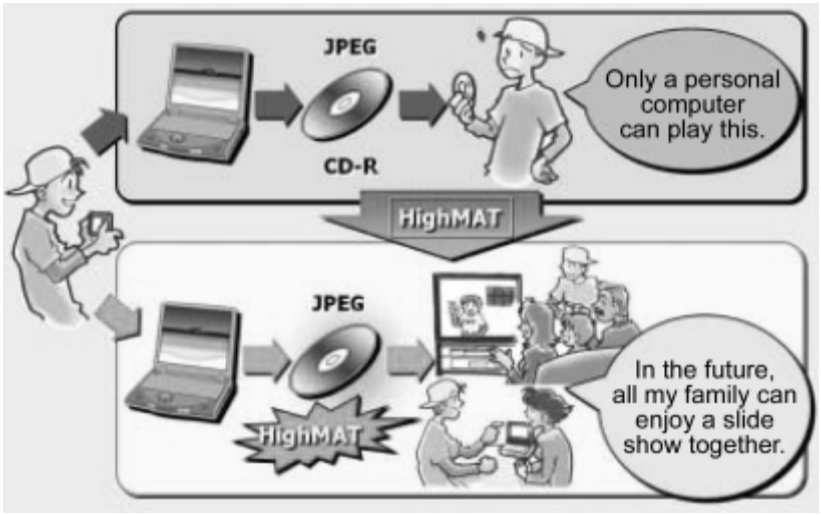
15.3 The advantages of using HighMAT

Applying the HighMAT standard will solve the following problems and will improve usability.

- It will create a common user interface for both PC and consumer products.



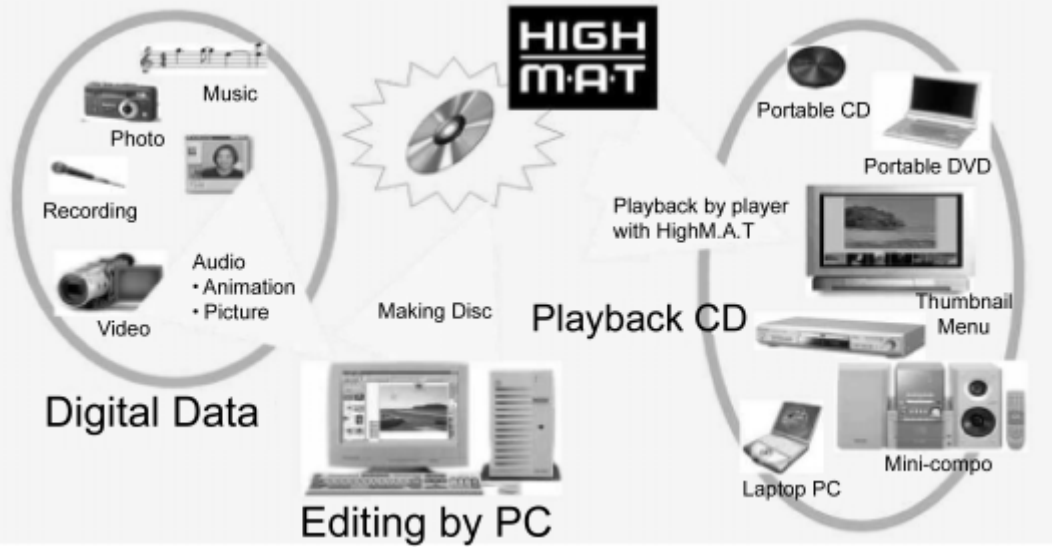
- Regardless of the types of consumer products, such as DVD players, portable CD players, car stereos and minicomputers, a consistent way to play for digital content will be created, and it will make it easier to retrieve data.



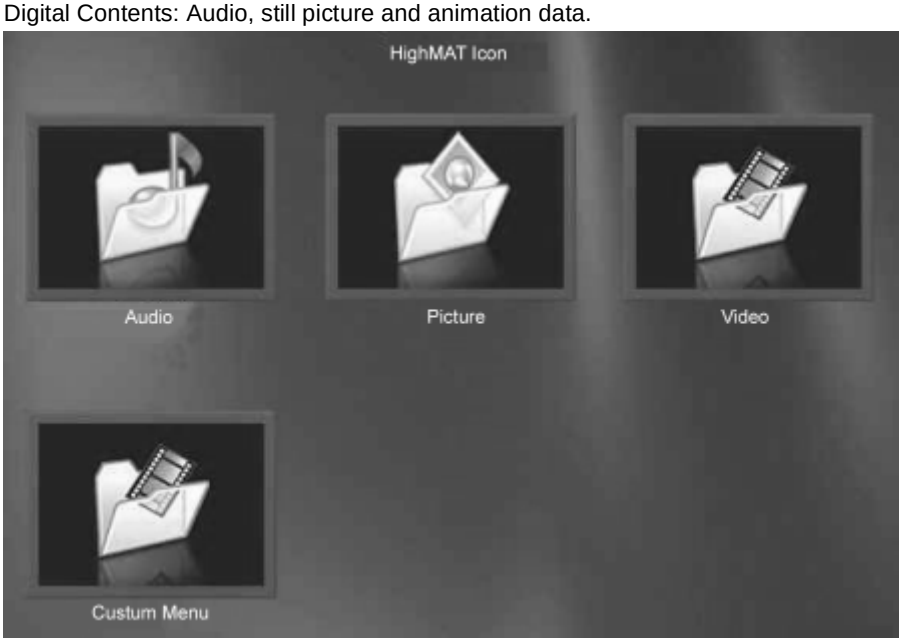
- You can also play digital content on the disc, which was created in accordance with the HighMAT format with a conventional CD-ROM player.

15.4 Outline of the HighMAT standard

1. Recording medium
   - CD-R/CD-RW
   - Supports ISO 9660 Level Expanded Joliet
   - For multiple session



2. Support data format
   - Level 1 player: WMA, MP3 (MPEG-1 Audio Layer 3)
   - Level 2 player: WMA, MP3 (MPEG-1 Audio Layer 3), JPEG
   - Level 3 player: WMA, MP3 (MPEG-1 Audio Layer 3), JPEG, WMV, MPEG4 (optional)
3. Limitation of data format
   - WMA, MP3 (MPEG-1 Audio Layer 3) 64 kbps - 160.999 kbps, 44.1 kHz, stereo, fixed bit rate/variable bit rate.
   - WMA, V2 and above, excluding Lossless/Voice/Pro
   - JPEG: Max 6M pixel, Maximum file size: 3 MB
4. Limitations regarding the number of files on the media, etc.
   - Total number of audio files: Maximum 450
   - Total number of still picture files: Maximum 999
   - Total number of animation files: Maximum 200
   - Total number of directories: Maximum 400
   - Length of a file name: Maximum 108 characters (Unicode)
   - Total number of play lists: Maximum 200
   - Number of contents in the playlist: Maximum 900
5. Composition of HighMAT disc
   - Menu: Classified for the navigation of the HighMAT digital contents. When menu selected, its submenu or the play list will be displayed.
   - Play list: A list in which one or more digital contents are arranged in order.
   - Group: Sub-divided group of a play list.
   - Digital Contents: Audio, still picture and animation data.

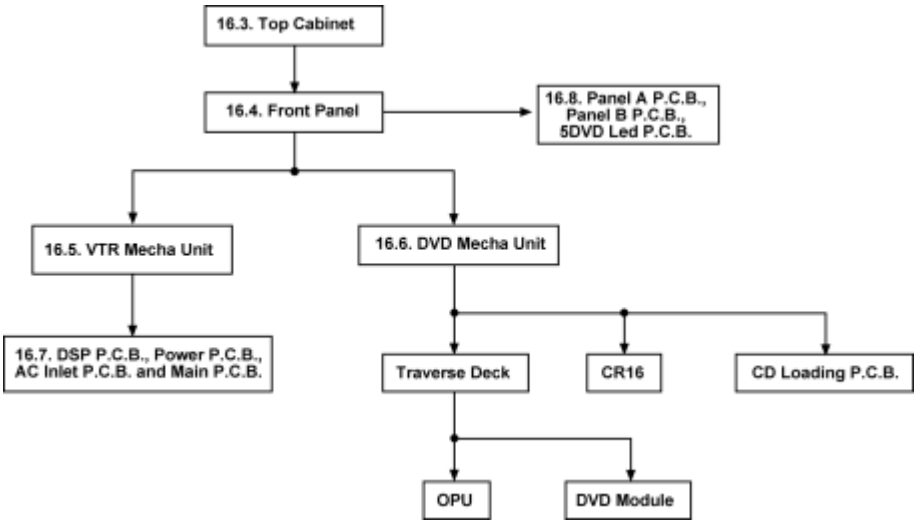


16 Assembling and Disassembling

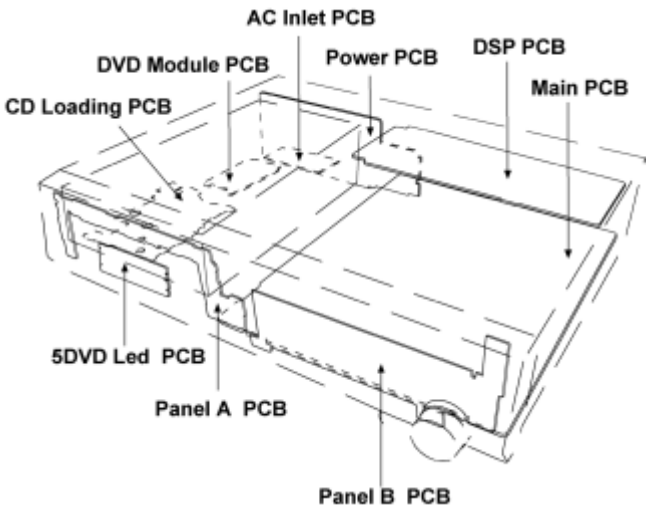
16.1 Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.

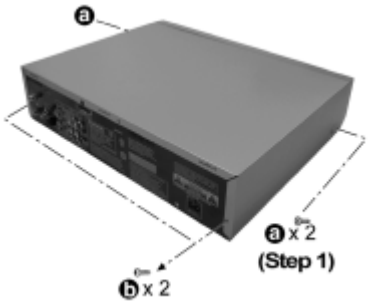

16.3. Top Cabinet
16.4. Front Panel
16.8. Panel A P.C.B., Panel B P.C.B., 5DVD Led P.C.B.
16.5. VTR Mecha Unit
16.6. DVD Mecha Unit
16.7. DSP P.C.B., Power P.C.B., AC Inlet P.C.B. and Main P.C.B.
Traverse Deck
CR16
CD Loading P.C.B.
OPU
DVD Module

16.2 P.C.B. Positions

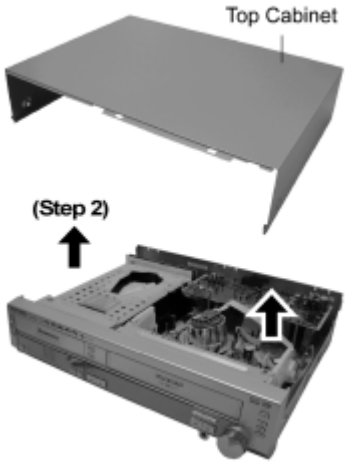


16.3 Disassembly of Top Cabinet

Step 1: Remove all the screws.



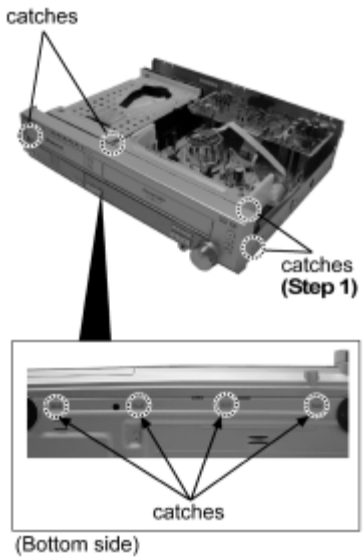
Step 2: Remove the Top Cabinet as arrow shown below.



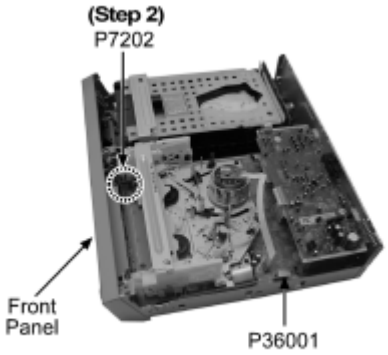
16.4 Disassembly of Front Panel

- Follow the (Step 1) to (Step 2) of item 16.3

Step 1: Release all the catches.

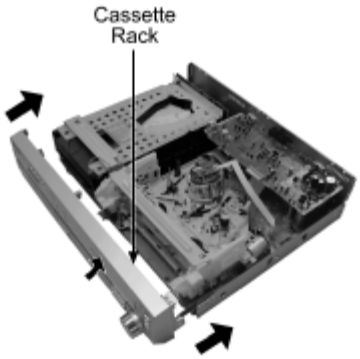


Step 2: Detach the P7202 and FFC board (P36001).



Caution of disassembly for Front Panel

Press upward the cassette rack to place the Front Panel.



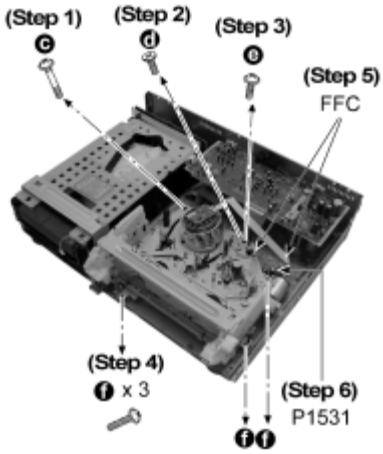
16.5 Disassembly of VTR Mecha Unit

- Follow the (Step 1) to (Step 2) of item 16.3
- Follow the (Step 1) to (Step 2) of item 16.4

Step 1 to 4: Remove all the screws.

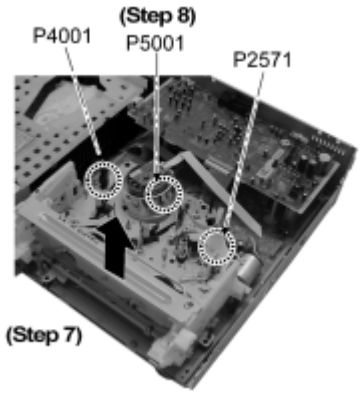
Step 5: Detach all the FFC board (P4002, P2501).

Step 6: Disconnect the connector (P1531).



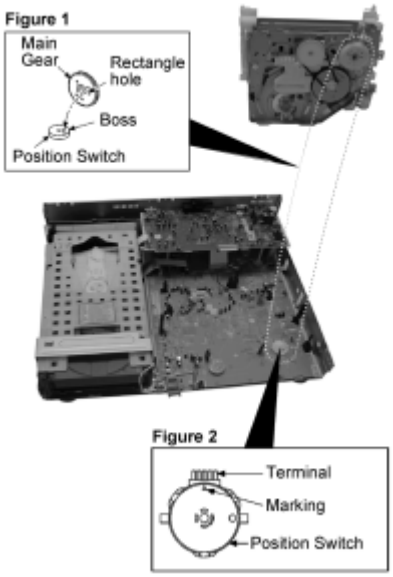
Step 7: Lift up the VTR Mecha Unit as arrow shown below.

Step 8: Detach the connector (P5001, P4001, P2571) carefully when lift up the VTR Mecha Unit.

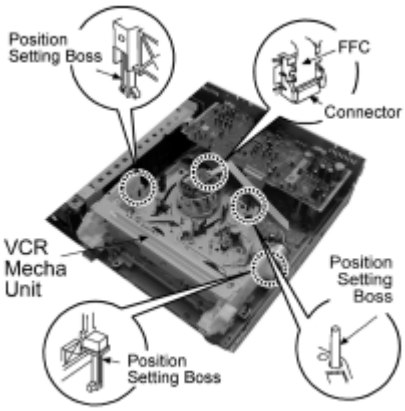


Caution of assembly the VTR Mecha Unit

1. Join the marking (△)of the position switch tothe position of “EJECT” (the center part of the terminal). (Figure 2)
2. Assembly the boss at the position switch to the rectangular hole at the main gear. (Figure 1)



3. Slowly join back the VTR Mecha Unit to fit the position setting boss (3 locations) on the Main unit.
4. Make sure the FFC insert to the the connector (P5001).

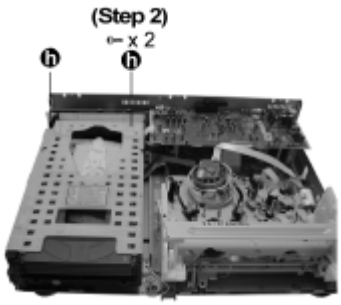


16.6 Disassembly of DVD Mecha Unit

- Follow the (Step 1) to (Step 2) of item 16.3
- Follow the (Step 1) to (Step 2) of item 16.4

Step 1: Remove 1 screw and DVD Bracket.

Step 2: Remove 2 screws.



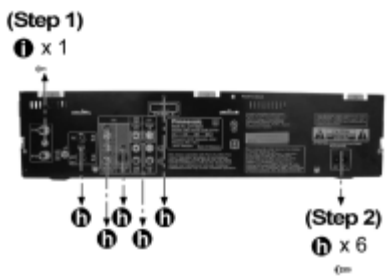
Step 3: Detach all the FFC board (P36004, P36005).

16.7 Disassembly of DSP, Power, AC Inlet and Main P.C.B.

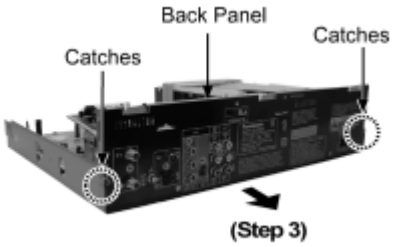
- Follow the (Step 1) to (Step 2) of item 16.3
- Follow the (Step 1) to (Step 8) of item 16.5
- Follow the (Step 3) of item 16.6

Step 1: Remove 1 screw.

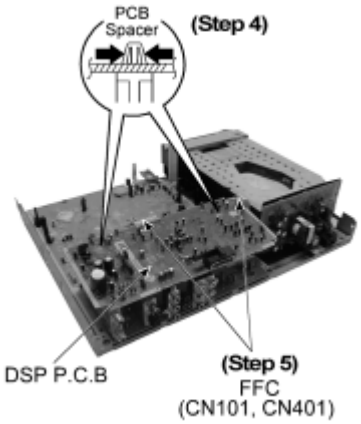
Step 2: Remove 6 screws.



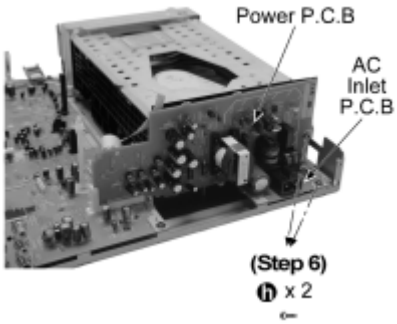
Step 3: Remove the back panel as arrow shown below.



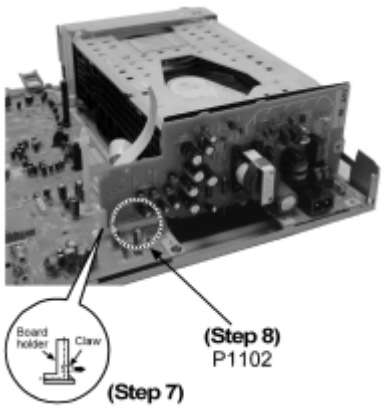
Step 4: Press the PCB Spacer as arrow shown and lift up the DSP P.C.B.
Step 5: Detach all the FFC board (CN101, CN401).



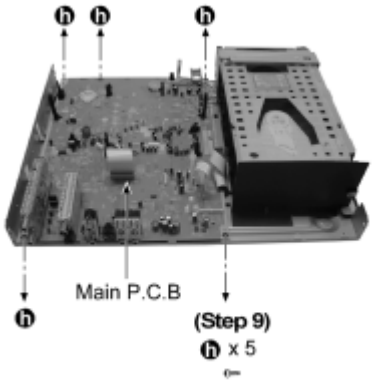
Step 6: Remove 2 screws.



Step 7: Detach the POWER P.C.B. and AC INLET P.C.B. while removing tab on board holder.
Step 8: Detach the connector (P1102).



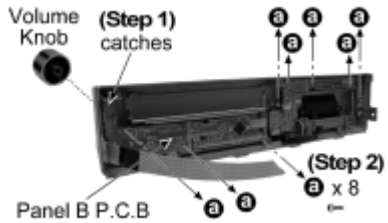
Step 9: Remove 5 screws.



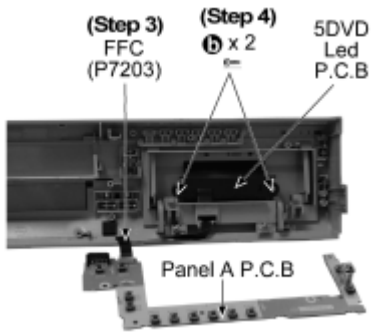
16.8 Disassembly of Panel A P.C.B., Panel B P.C.B. and 5DVD Led P.C.B.

- Follow the (Step 1) to (Step 2) of item 16.3
- Follow the (Step 1) to (Step 2) of item 16.4

Step 1: Release the catches and remove Volume Knob.
Step 2: Remove 8 screws.



Step 3: Detach the FFC board (P7203).
Step 4: Remove 2 screws.



16.9 Procedure for removing CR16 mechanism (Precaution)

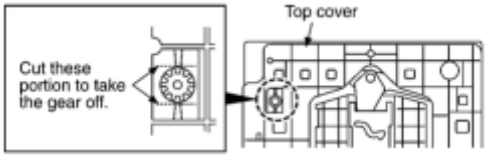
1. Turn off by pressing power SW in the body.
2. Unplug AC power cord after the indication of [GOOD-BYE], then disassemble the body.
3. Disassemble the body, and take out CD loading mechanism.
4. Perform disassembly according to the following procedure for disassembly.

16.10 CR16 mechanism disassembly procedure

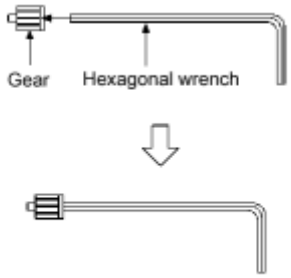
16.10.1 Gear for servicing information

- This unit has a gear which used for chacking items (open/close of disc tray, up/down operation of traverse unit by manually) when servicing. (For gear information, that is described on the items for disassembly procedures.)
- For preparation of gear (for servicing), perform the procedures as follows.
- In case of re-servicing the same set, the " gear for servicing" may be took off because it had been used. So, the "gear for servicing" must be stored.

1. Remove the gear attached to top cover of CD loading mechanism.



2. Insert the hexgonal wrench (2.5mm) into the gear.

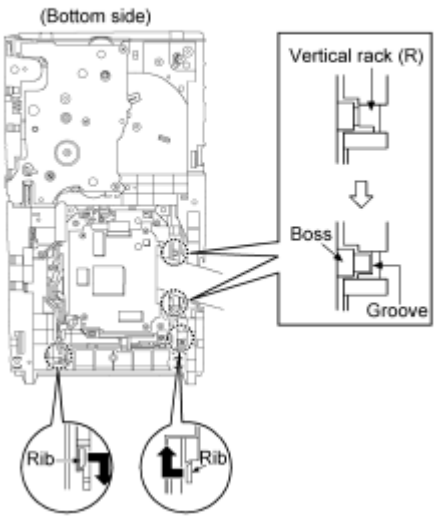


(Preparation of gear as jig is completed)

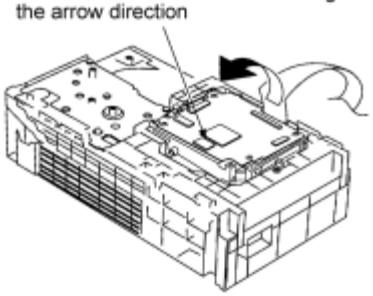
16.10.2 Replacement of traverse deck

- Follow the (Step 1) - (Step 2) of Item 16.3.
- Follow the (Step 1) - (Step 2) of Item 16.4.
- Follow the (Step 1) - (Step 5) of Item 16.6.

(Step 1)
Move ribs at both sides to the arrow direction
(The vertical rack (R) slides and the groove opens)



(Step 2)
Remove CD traverse deck rotating to the arrow direction

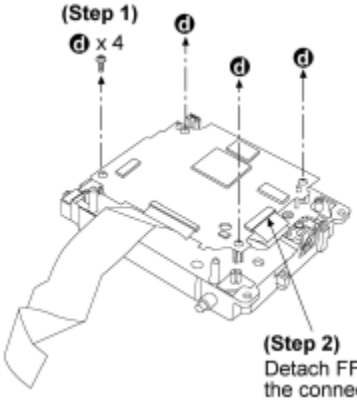


16.10.3 Replacement of optical pickup unit

- Follow the (Step 1) - (Step 2) of Item 16.3.
- Follow the (Step 1) - (Step 2) of Item 16.4.
- Follow the (Step 1) - (Step 5) of Item 16.6.
- Follow the (Step 1) - (Step 2) of Item 16.10.2.

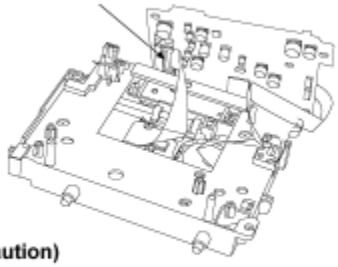
(Step 1)

ⓓ x 4

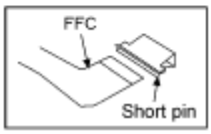


(Step 2)
Detach FFC from the connector

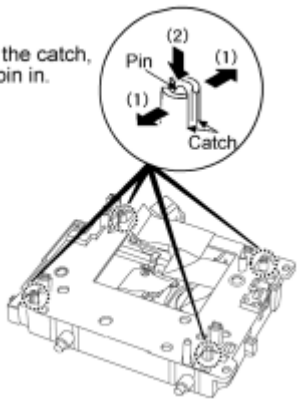
(Step 3)
Pull out FFC from the connector



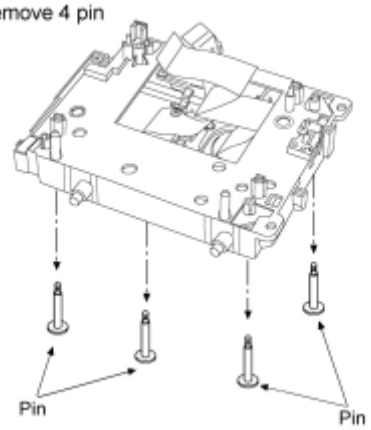
(Caution)
Insert a short pin into FFC of the optical pickup. [See "Notice on handling of the optical pickup"]



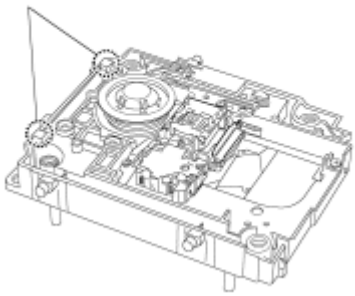
(Step 4)
Widening the catch, push the pin in.



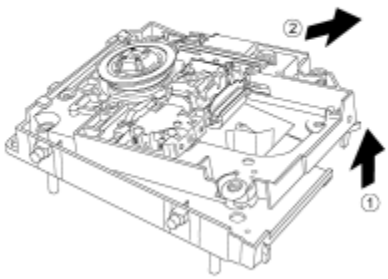
(Step 5)
Remove 4 pin



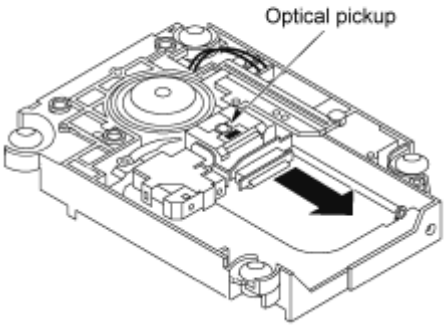
(Caution)
Be careful the catches when remove the traverse deck unit.



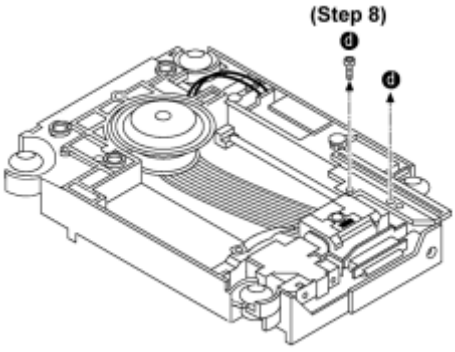
(Step 6)
Remove the traverse deck unit as arrow shown.

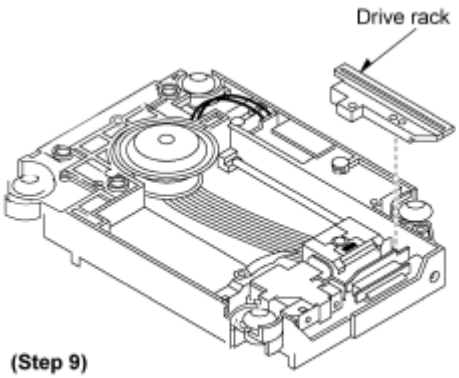


(Step 7)
Shift the optical pickup to the furthest backward as arrow shown.

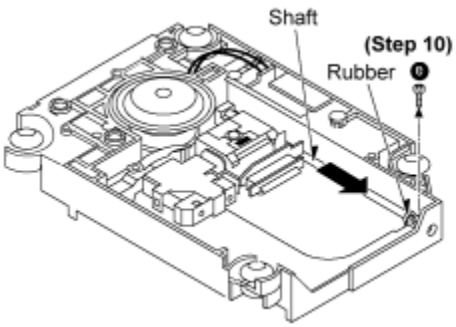


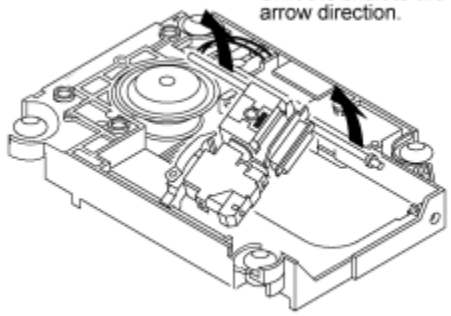
(Step 8)





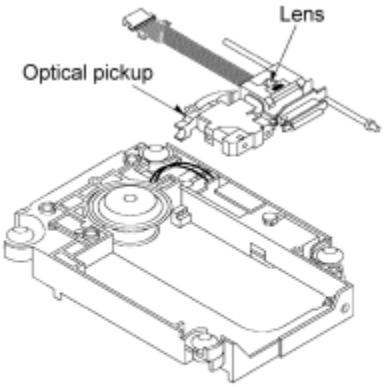
(Step 9)
Remove the drive rack.





(Step 11)
Shift the shaft to the arrow direction.

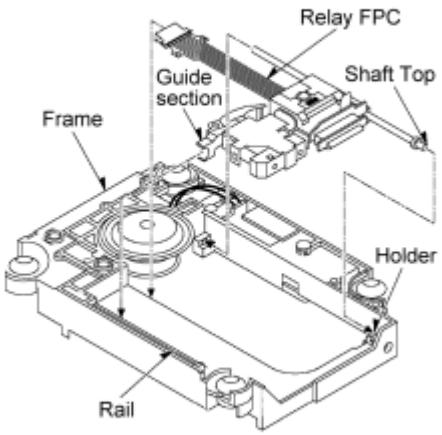
(Step 12)
Lift the optical pickup unit with the shaft.

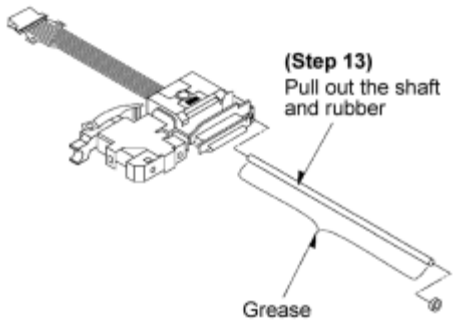


(Caution)
1. Do not subject optical pickup to static electricity as it is extremely sensitive to electrical shock
2. Do not touch the lens of the optical pickup

Procedure for Assembly of Optical Pickup Unit

(Step 1)
Put relay FPC into a hole of frame



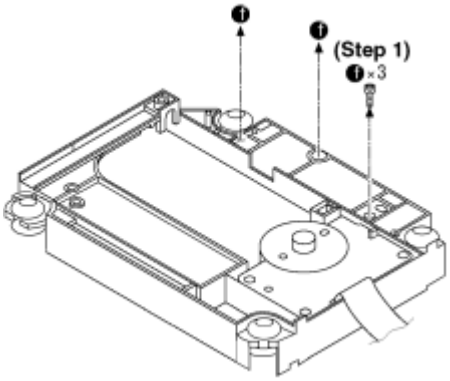


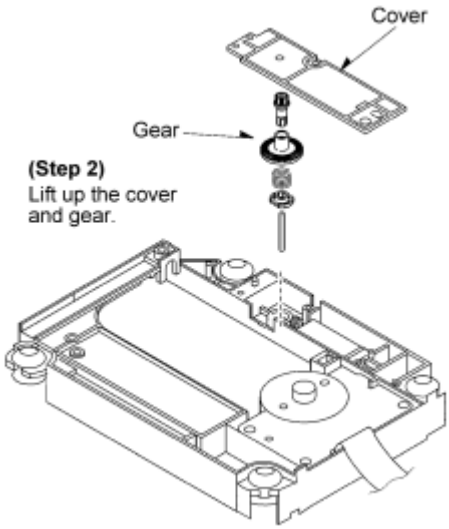
(Step 3)
Put shaft top into the holder.

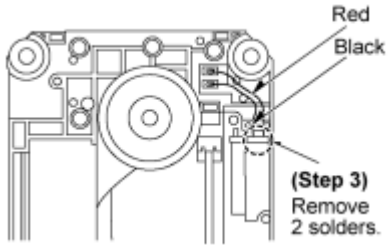
(Step 2)
Fit optical pickup unit guide into the rail.

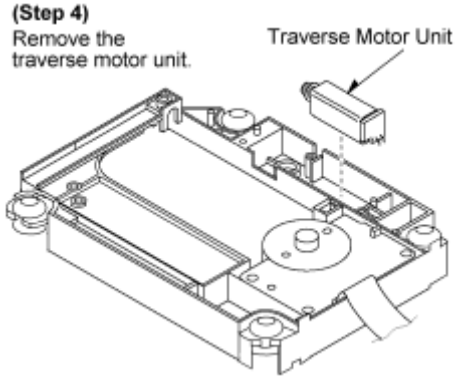
16.10.4 Disassembly of Traverse Motor (Unit) and Spindle Motor (Unit)

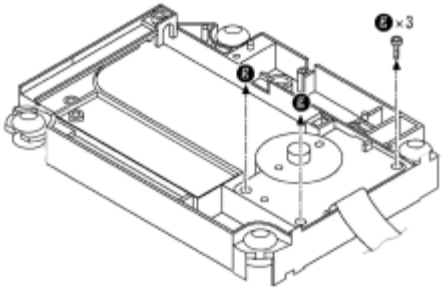
- Follow the (Step 1) - (Step 2) of Item 16.3.
- Follow the (Step 1) - (Step 2) of Item 16.4.
- Follow the (Step 1) - (Step 5) of Item 16.6.
- Follow the (Step 1) - (Step 2) of Item 16.10.2.
- Follow the (Step 1) - (Step 13) of Item 16.10.3.



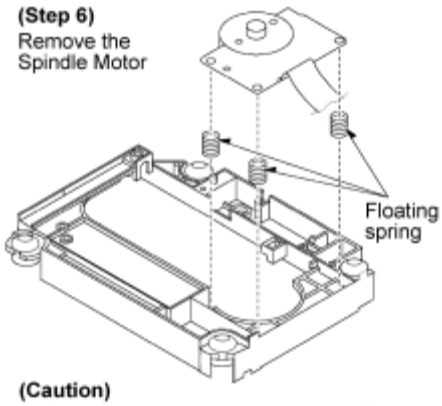








(Step 5)
Remove 3 screws with 1.8mm slotted screwdriver.

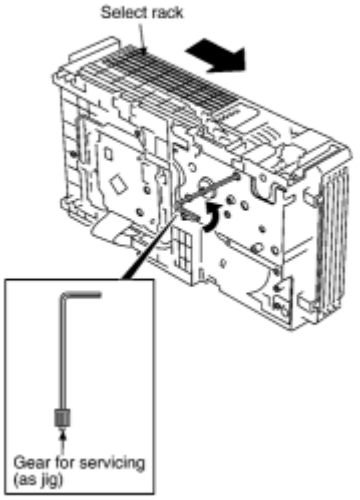


(Caution)
As floating springs (3 pieces) come off at the same time, be careful not to lose them.

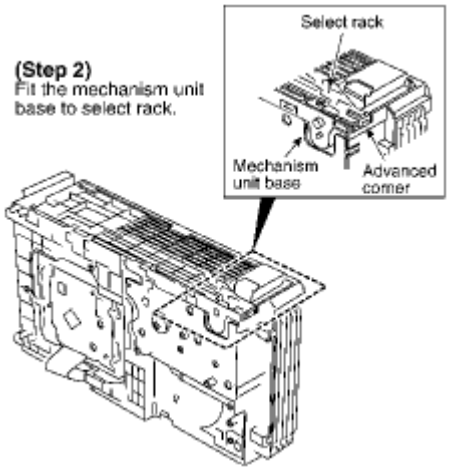
16.10.5 Replacement for the disc tray

- Follow the (Step 1) - (Step 2) of Item 16.3.
- Follow the (Step 1) - (Step 2) of Item 16.4.
- Follow the (Step 1) - (Step 5) of Item 16.6.

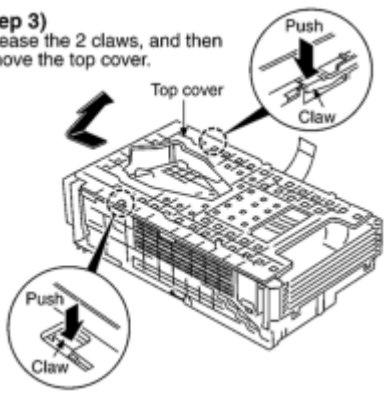
(Step 1)
Rotate the gear for servicing and move the select rack to advanced corner.



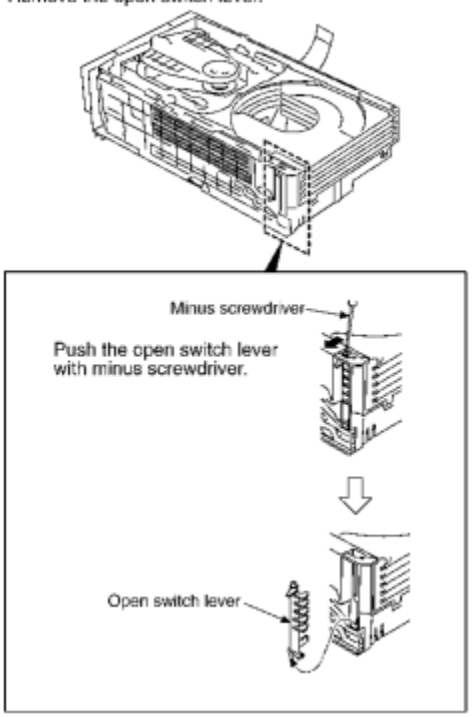
(Step 2)
Fit the mechanism unit base to select rack.

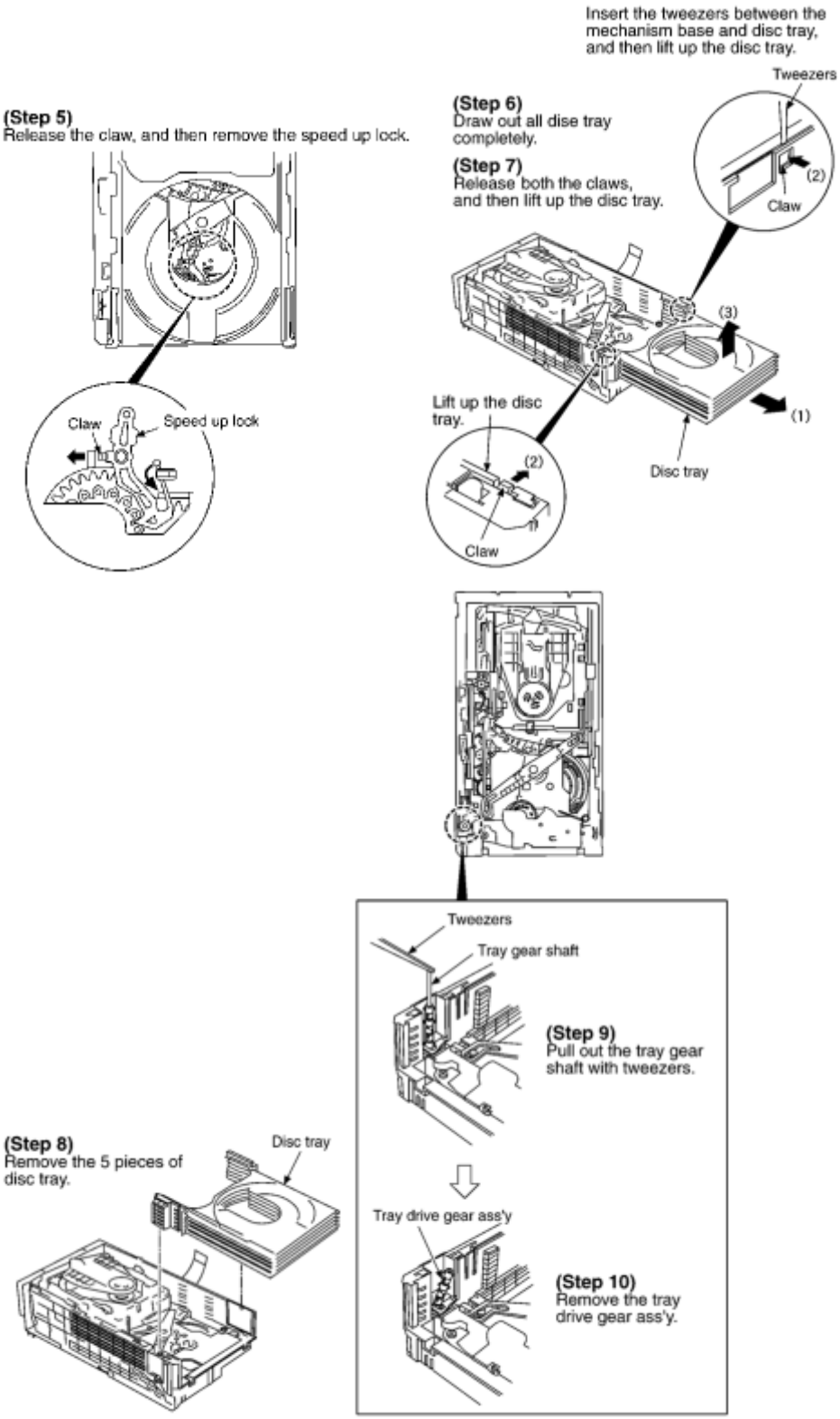


(Step 3)
Release the 2 claws, and then remove the top cover.



(Step 4)
Remove the open switch lever.



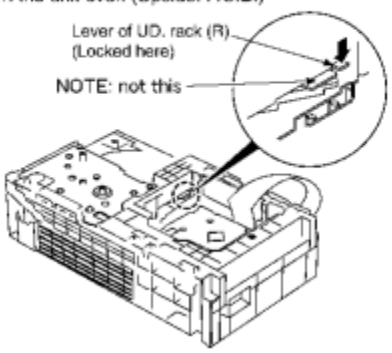


16.10.6 Replacement for the traverse deck

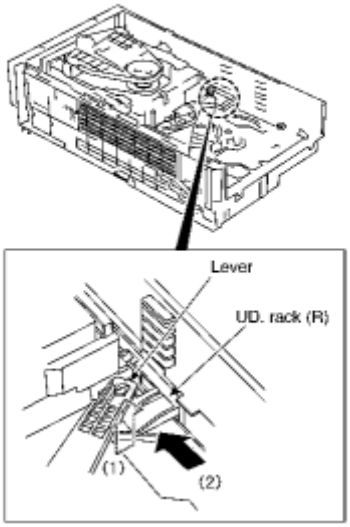
- Follow the (Step 1) - (Step 2) of Item 16.3.
- Follow the (Step 1) - (Step 2) of Item 16.4.
- Follow the (Step 1) - (Step 5) of Item 16.6.
- Follow the (Step 1) - (Step 10) of Item 16.10.5.

(Step 1)
Confirm the position for lever of UD. rack (R) to remove traverse unit.

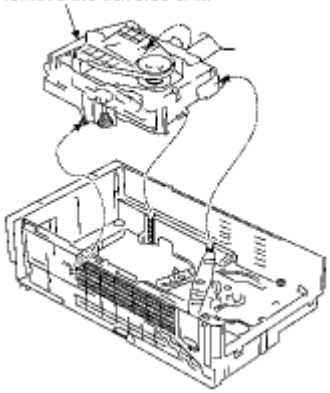
(Step 2)
Turn the unit over. (Upside: P.C.B.)



(Step 3)
Turn the unit over again, slide UD. rack (R) while pushing up the lever from the bottom.

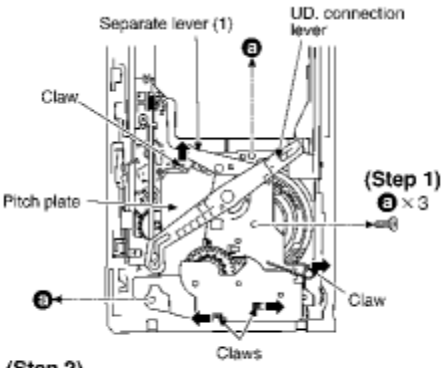


(Step 4)
Remove the traverse unit.



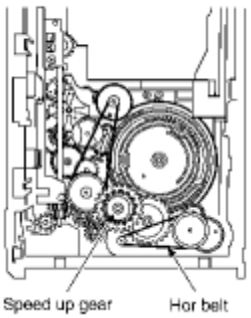
16.10.7 Disassembly for loading unit

- Follow the (Step 1) - (Step 2) of Item 16.3.
- Follow the (Step 1) - (Step 2) of Item 16.4.
- Follow the (Step 1) - (Step 5) of Item 16.6.
- Follow the (Step 1) - (Step 10) of Item 16.10.5.
- Follow the (Step 1) - (Step 4) of Item 16.10.6.

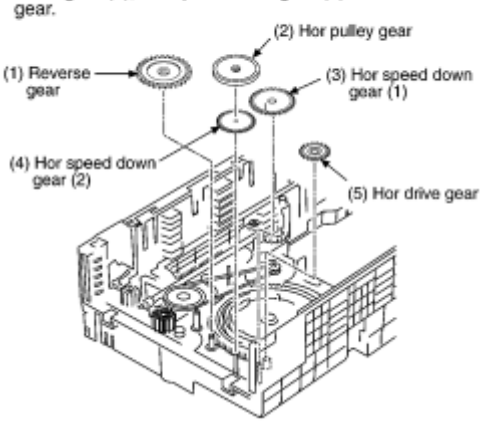


(Step 2)
Release the 4 claws, and then remove the pitch plate together with separate lever (1) and UD. connection lever.

(Step 3)
Remove the speed up gear and hor belt.

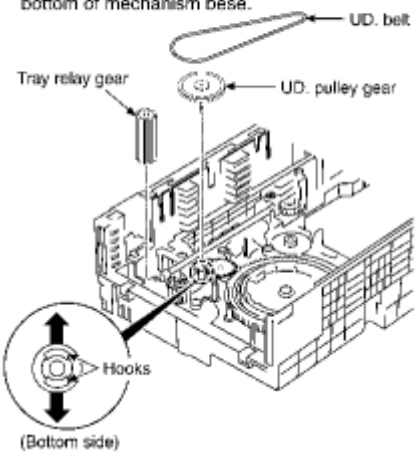


(Step 4)
Remove the reverse gear, hor pulley gear, hor speed down gear (1), hor speed down gear (2) and hor drive gear.

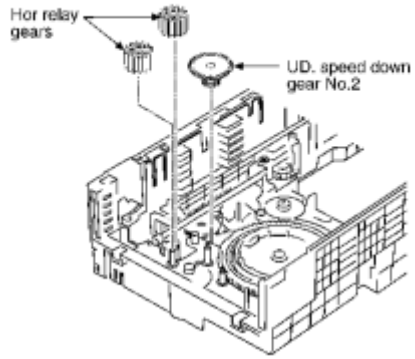


(Step 5)
Remove the UD. belt and tray relay gear.

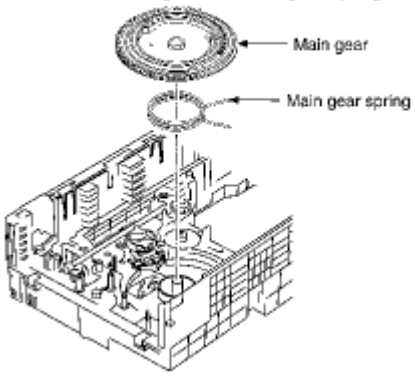
(Step 6)
Pull out the UD. pulley gear, loosen 2 hooks of the bottom of mechanism base.



(Step 7)
Remove the 2 hor relay gears and UD. speed down gear No.2.

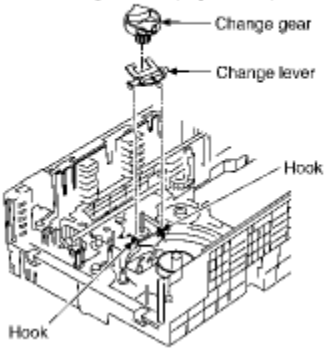


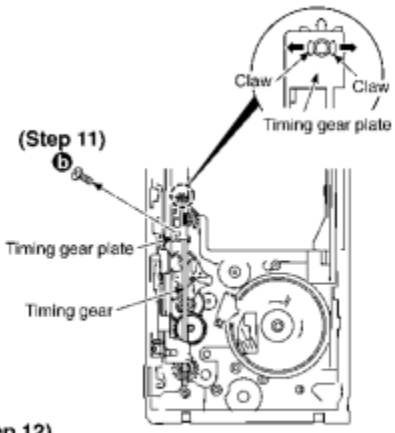
(Step 8)
Remove the main gear and main gear spring.



(Step 9)
Remove the change gear.

(Step 10)
Raise the change lever upright, and pull it out of hook.

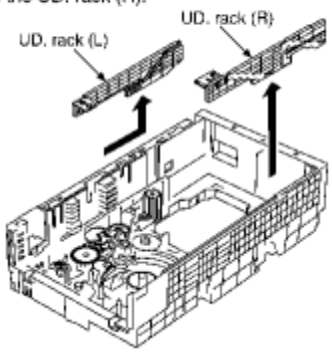




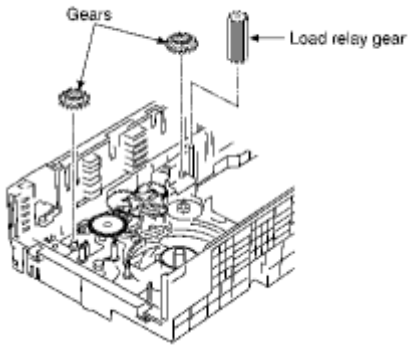
(Step 12)
Release the 2 claws, and then remove the timing gear and timing gear plate.

(Step 13)
Move the UD. rack (L) to backward, and then remove it.

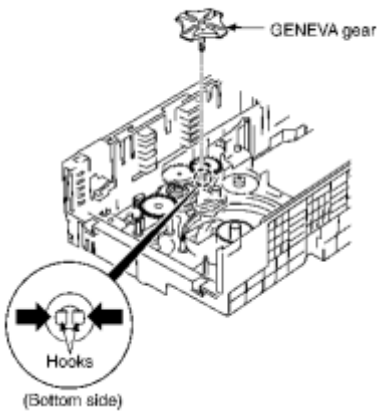
(Step 14)
Remove the UD. rack (R).



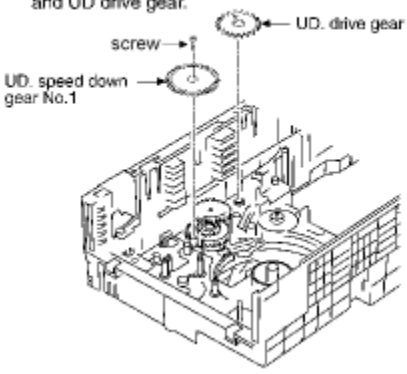
(Step 15)
Remove the 2 gears and load relay gear.



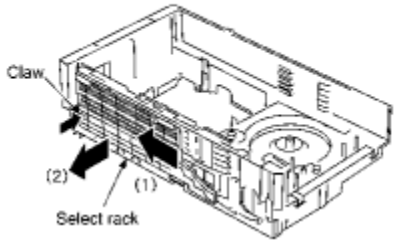
(Step 16)
Pull out the GENEVA gear, loosen 2 hooks of the bottom of mechanism base.

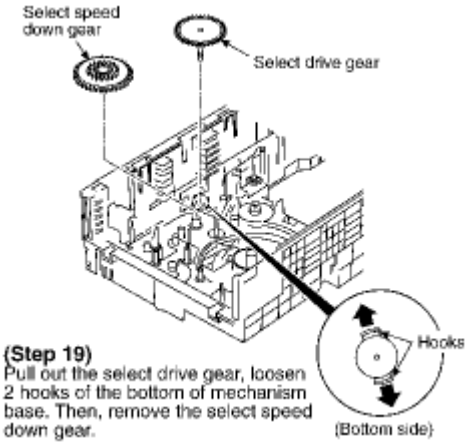


(Step 17)
Remove the UD. speed down gear No.1 and UD drive gear.



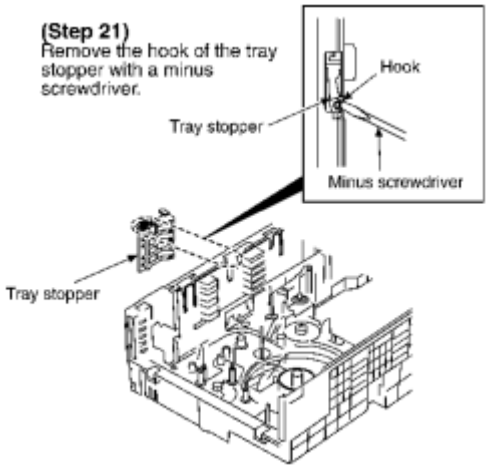
(Step 18)
Slide the select rack to the edge direction of the arrow (1). Push the claw and pull out to arrow (2) while sliding the select rack to the arrow (1).



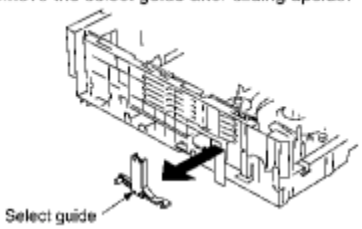


(Step 19)
Pull out the select drive gear, loosen 2 hooks of the bottom of mechanism base. Then, remove the select speed down gear.

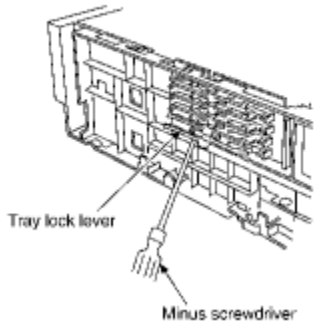
(Step 21)
Remove the hook of the tray stopper with a minus screwdriver.



(Step 20)
Remove the select guide after sliding upside.



(Step 22)
Remove the bottom of the tray lock lever with a minus screwdriver and others.



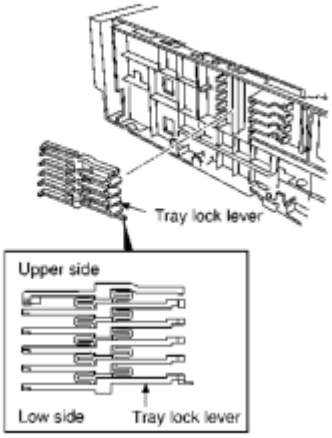
16.11 CR16 MECHANISM ASSEMBLY PROCEDURE

The following specified greases and/or oil must be applied when some specific parts are changed.

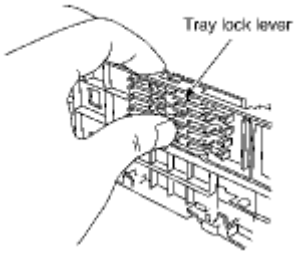
1. Floil grease (VFK1298) : The floil grease must be applied to tray, tray (L) and tray (R).
2. Hanarl oil (VFK1700) : The hanarl oil must be applied to any parts with grease other than the said parts.

- Follow the (Step 1) - (Step 2) of Item 16.3.
- Follow the (Step 1) - (Step 2) of Item 16.4.
- Follow the (Step 1) - (Step 5) of Item 16.6.
- Follow the (Step 1) - (Step 10) of Item 16.10.5.
- Follow the (Step 1) - (Step 4) of Item 16.10.6.
- Follow the (Step 1) - (Step 22) of Item 16.10.7.

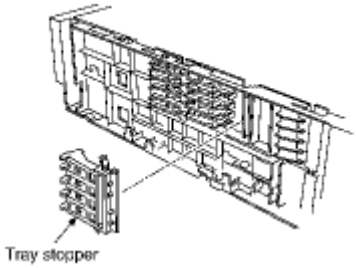
(Step 1)
Install the tray lock lever to mechanism base.



(Step 2)
Push the tray lock lever with a hand and install it.

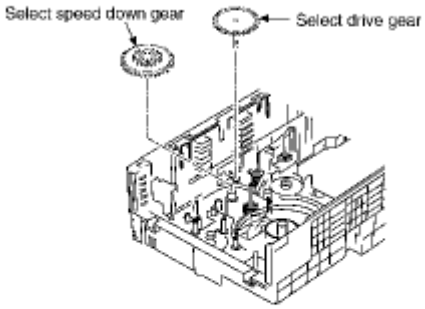


(Step 3)
Install the tray stopper to mechanism bese.

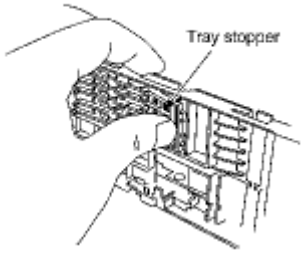


(Step 6)
Install the select speed down gear to mechanism base.

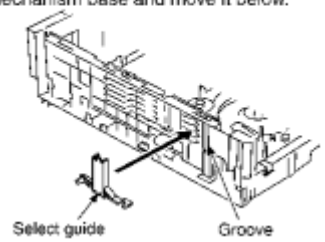
(Step 7)
Install the select drive gear to mechanism base.

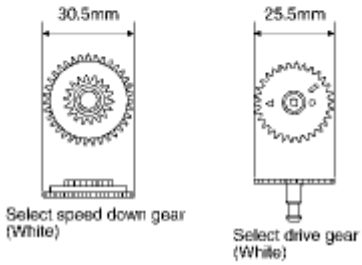


(Step 4)
Push the tray stopper with a hand and install it.

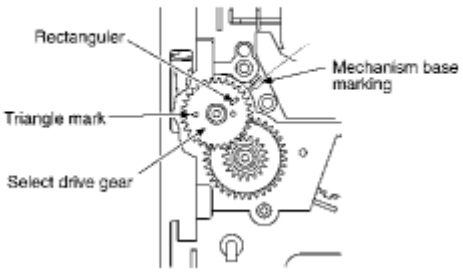


(Step 5)
Insert the select guide with a groove of the mechanism base and move it below.



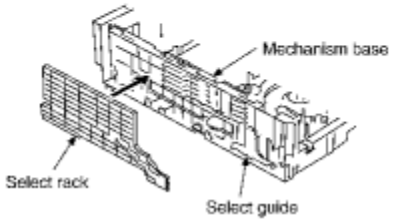


(Step 8)
Fit a mechanism base marking to the rectanguler mark of gear so that the triangle mark can indicate the sideward direction.

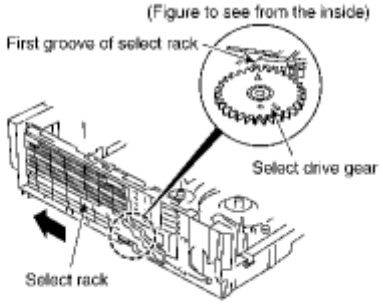


(Step 9)
Install the select rack to mechanism base.
Checking items before the installation.
1. Check select guide is completely in lowest position.
2. Check its phase of select drive gear is correct position.(Rectangle/Trianguler mark)(Refer to Step 8)

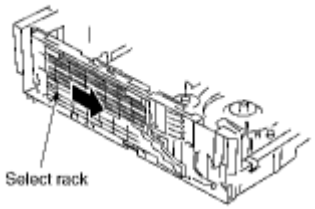
1. Put a select rack down with it fitted to its circumference of mechanism base.



(Figure to see from the inside)

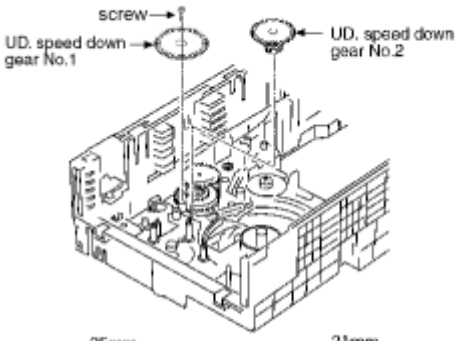


2. Slide the select rack with it's pushing to a little right direction and install it.

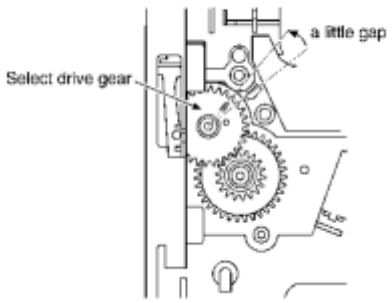


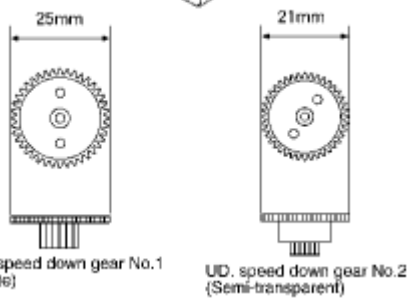
3. Check whether its end of triangular mark is in first groove of select rack, after fixing.
4. After insertion of select rack, continue the following work until the indication that it gose forward. And, all the while it must be checked that select rack is in the extreme end.

(Step 10)
Install the UD. speed down gear No.1 and UD. speed down gear No.2.

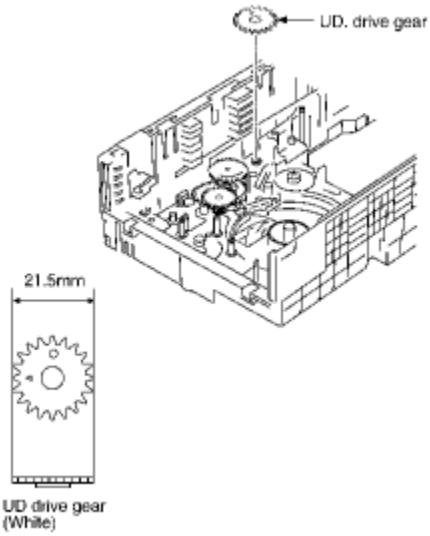


5. After insertion the select rack, the marking of select gear has a little gap when it is in the extreme end.

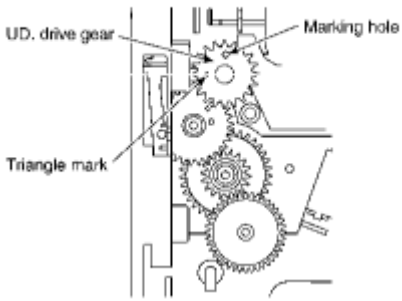




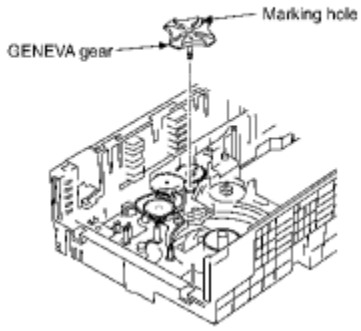
(Step 11)
Install the UD. drive gear to mechanism base.

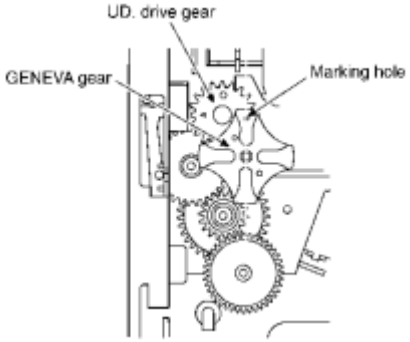


(Step 12)
Insert the UD. drive gear with its marking hole upward. At that time, its triangle mark should be sideways.

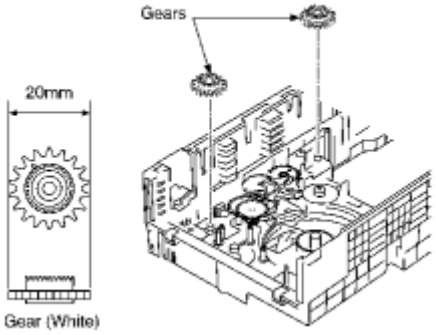


(Step 13)
Insert the GENEVA gear with its marking hole upward, and fix it by 2 hooks on bottom of mechanism base.
At that time, UD. drive gear mustn't be moved.

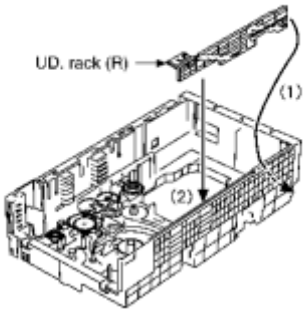


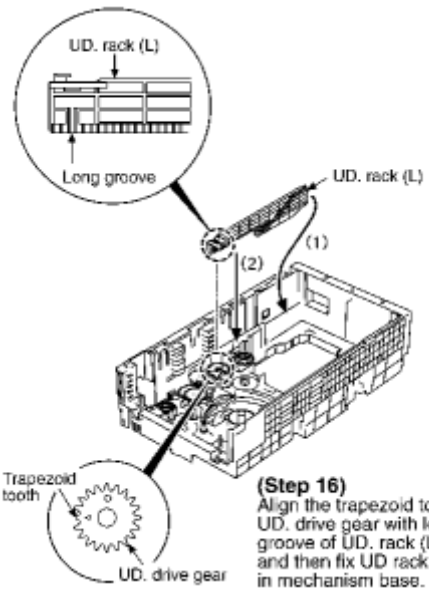


(Step 14)
Install the 2 gears to mechanism base.



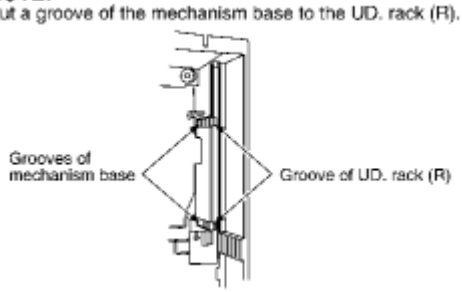
(Step 15)
Insert the UD. rack (R) to (2) from arrow (1).



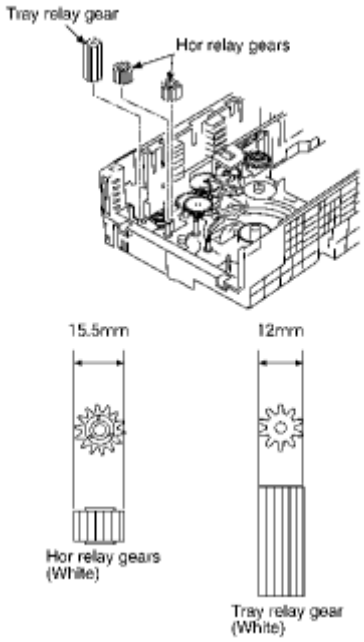


(Step 16)
Align the trapezoid tooth of UD. drive gear with long groove of UD. rack (L), and then fix UD rack (L) in mechanism base.

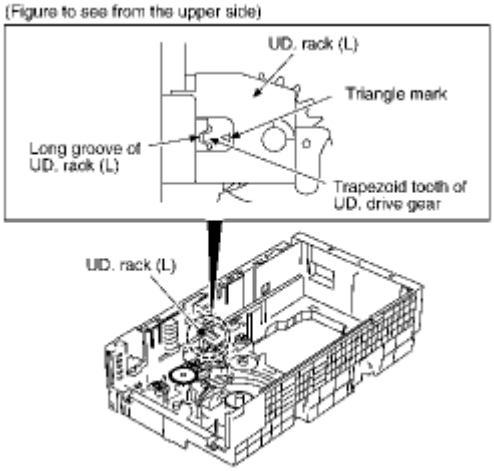
NOTE:
Put a groove of the mechanism base to the UD. rack (R).



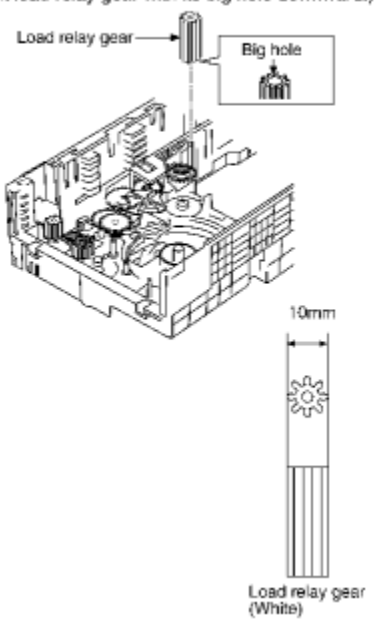
(Step 17)
Install the tray relay gear and 2 hor relay gears.



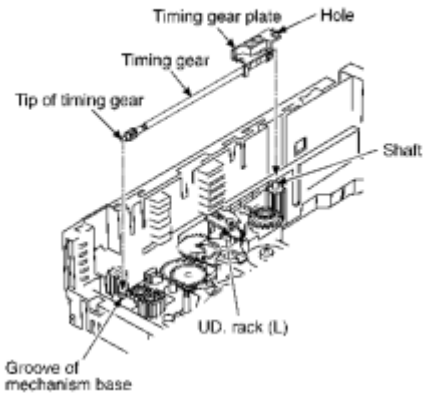
(Figure to see from the upper side)



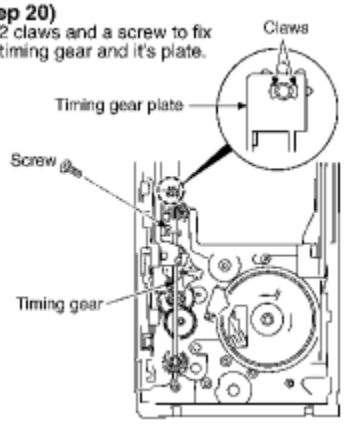
(Step 18)
Install the load relay gear to mechanism base.
(Fit load relay gear with its big hole downward.)



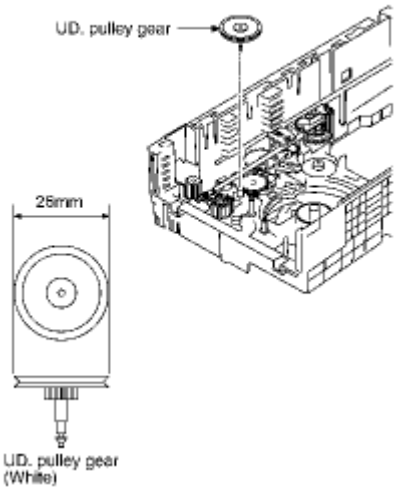
(Step 19)
Put on the top of the timing gear, then, install the timing gear and it's plate.
At that time avoid the UD. rack (L).



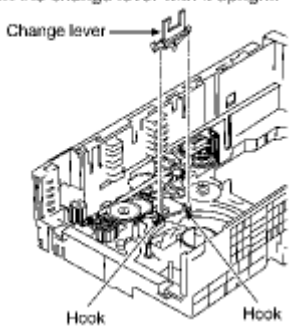
(Step 20)
Fix 2 claws and a screw to fix the timing gear and it's plate.



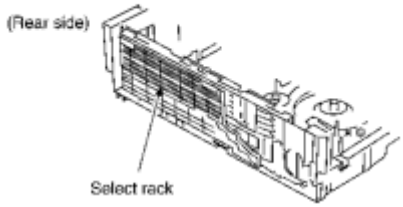
(Step 21)
Install the UD. pulley gear to mechanism base.

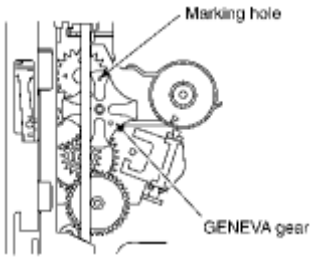


(Step 22)
Insert the change lever with it upright.

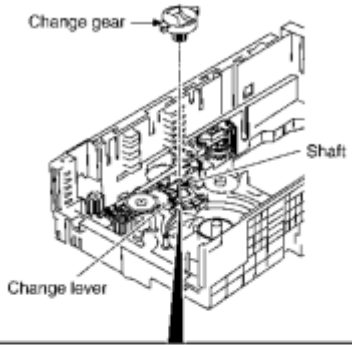


(Step 23)
Be sure the notice of bellow before fixing the change gear.
1. Select track should be in the rear of mechanism base.
2. Its hole of GENEVA gear should turn up.

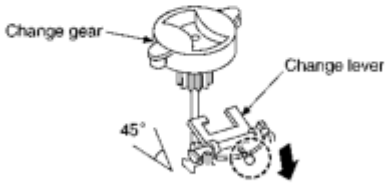




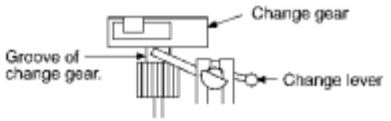
(Step 24)
Install the change gear as insert the change lever into the groove of change gear.



1. Pushing the ○ part and pull up the change lever 45°.

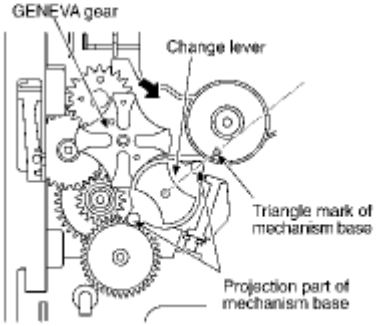


2. Insert the change lever into the groove of change gear.

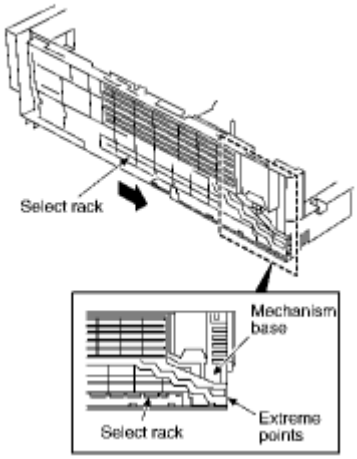


(Step 25)
Put change gear down with projection part of change gear fitted to triangle mark of mechanism base, when fixing change gear.
At that time, check change gear is inserted into the groove of change lever.

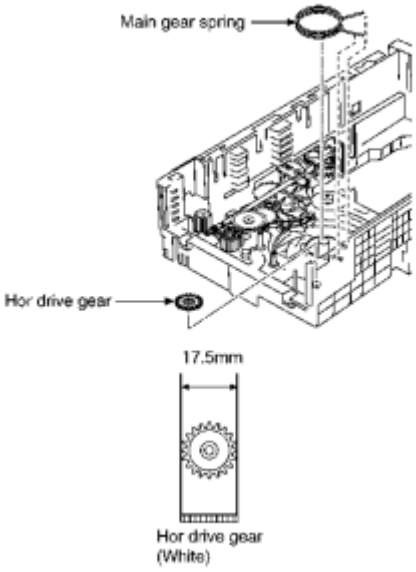
(Step 26)
Lastly, turn GENEVA gear clockwise slightly and drop change gear to mechanism base.



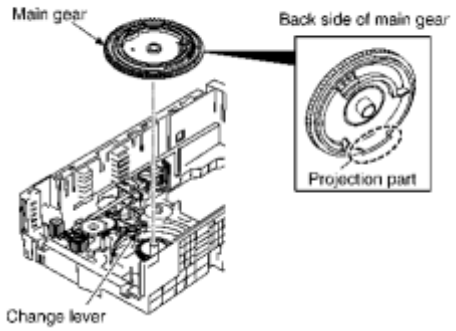
(Step 27)
Move the select rack smoothly forward manually until 2 extreme points of both select track and mechanism base.



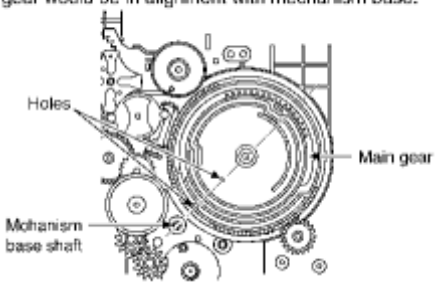
(Step 28)
Install the main gear spring and hor drive gear.



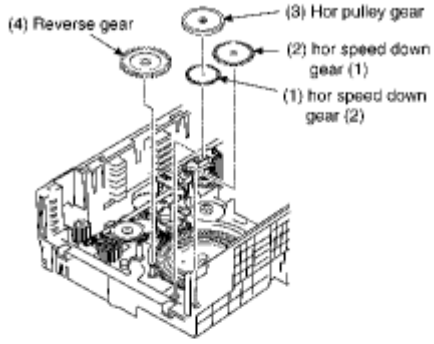
(Step 29)
Don't bring change lever into touch to projection part of main gear, when fixing main gear in mechanism base.

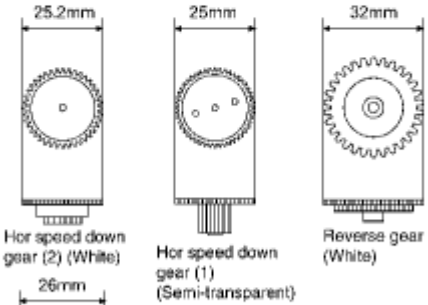


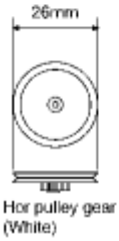
(Step 30)
After that, turn main gear so that 2 holes inside main gear would be in alignment with mechanism base.



(Step 31)
Install the hor speed down gear (2), hor speed down gear (1), hor pullry gear and reverse gear.

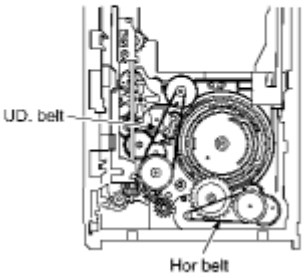




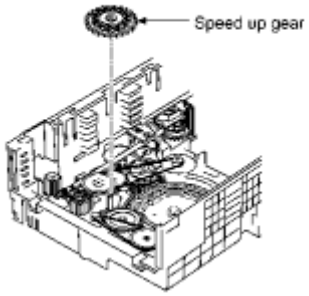


(Step 32)
Install the UD. belt and hor belt.

NOTE:
1. Take care not apply the grease to the belt.
2. Install the belt without twist.

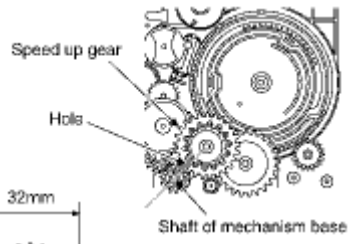


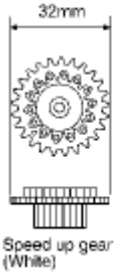
(Step 33)
Install speed up gear to its shaft of mechanism base with 2 fitting.

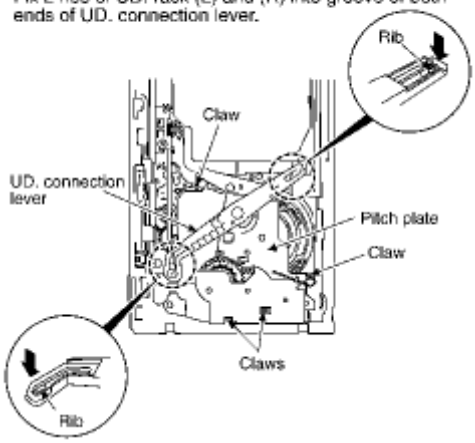


(Step 34)
Install the pitch plate. (The 4 claws should be latched.)

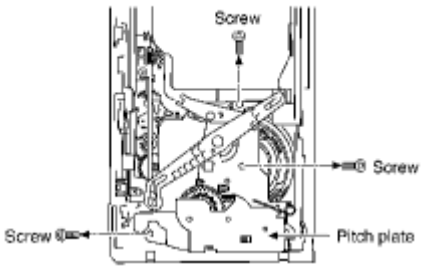
(Step 35)
Fix 2 ribs of UD. rack (L) and (R) into groove of both ends of UD. connection lever.



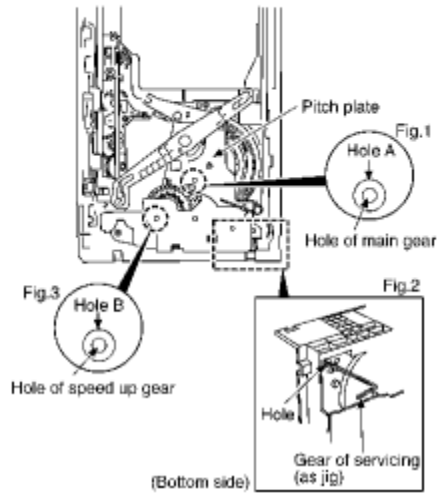




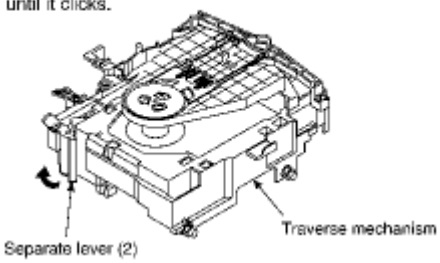
(Step 36)
Fixed it by three screws further.



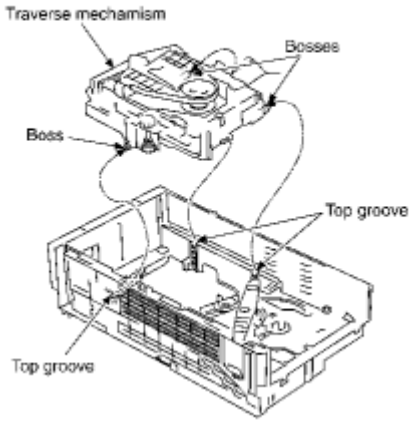
(Step 37)
Be sure the notice of below before fixing the traverse mechanism.
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.



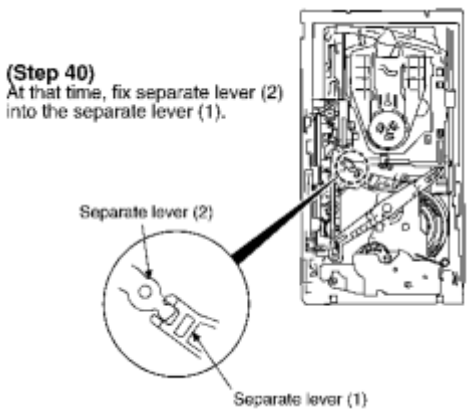
(Step 38)
Turn the separate lever (2) slowly toward left side until it clicks.



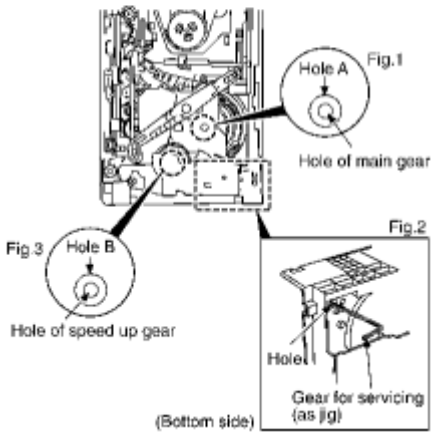
(Step 39)
Fix the left boss into the top groove of the UD. rack (L) and fix 2 bosses into the groove of the UD. rack (R).



(Step 40)
At that time, fix separate lever (2) into the separate lever (1).



(Step 41)
After the traverse mechanism fixed, confirm the phase in order below.
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.



3. In the cog of road gear, the groove with it's cutting halfway set side ward. (Refer to Fig.4)
Remove the traverse mechanism again when it is not set side ward and install it after adjustment of inserting position.
NOTE: By this time, do not adjust to rotate the road gear.

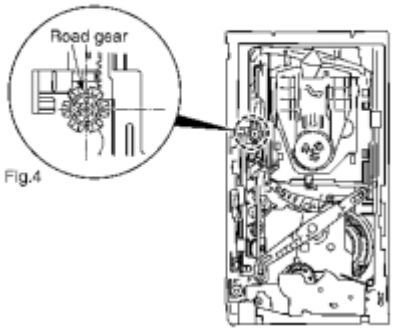
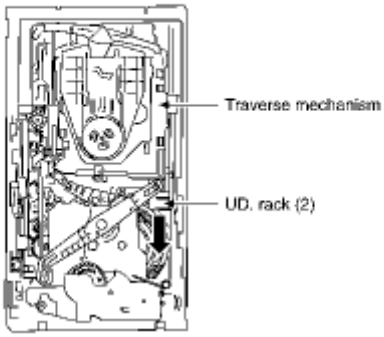


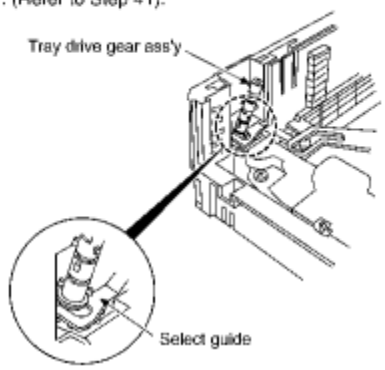
Fig.4

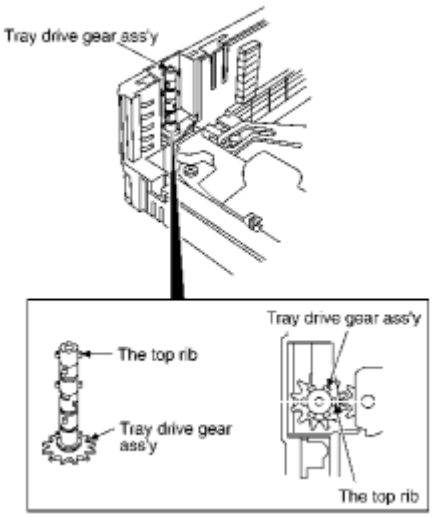
(Step 42)
After insertion of traverse mechanism, pull the UD. rack (R) on this side that each phase is "OK" and then lock the traverse mechanism.



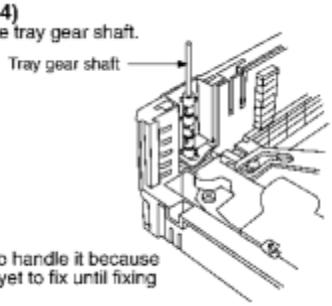
(Step 43)
Install the tray drive gear to select guide.
(Install the top rib of the tray drive gear with side ward.)

NOTE:
Confirm the each phase surely before install the tray drive gear. (Refer to Step 41).



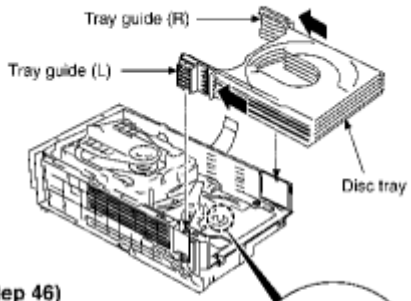


(Step 44)
Insert the tray gear shaft.

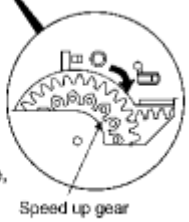


NOTE:
Be careful to handle it because the shaft is yet to fix until fixing top cover.

(Step 45)
Move the tray guide (R) and (L) to direction of arrow that fixed (stopped) it and install 5 pieces of disc tray.

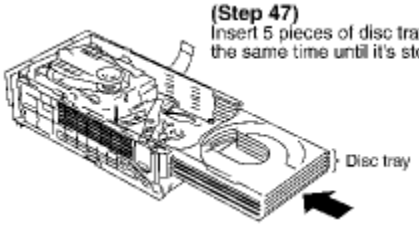


(Step 46)
Confirm that when the disc tray insert the upper side, the speed up gear is rotate clockwise a little.
- When the rotation of speed up gear is not clockwise or rotate, repeat from Step 45.
- Until the speed up gear rorate, repeat from Step 45 and 46.



NOTE:
While keeping all postion, install 5 pieces of disc tray.

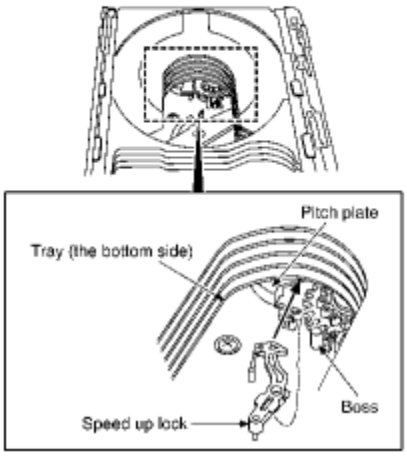
(Step 47)
Insert 5 pieces of disc tray at the same time until it's stop.



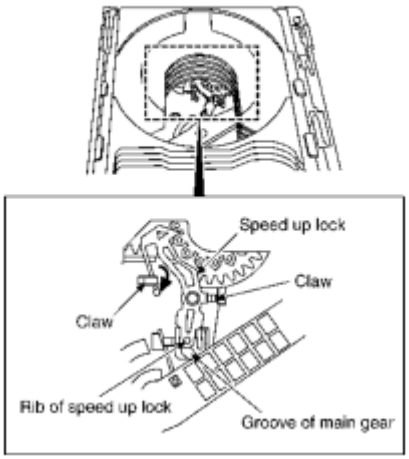
(Step 48)
Turn the traverse side 180°.

(Step 49)
While install the tip of speed up lock beween tray (No.1) of the most lower side and pitch plate for the time being.
(Do not to insert the cog of speed up gear), insert it to boss.

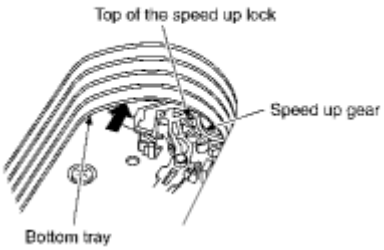
NOTE:
At that time, do not move the tray.
(See the tray the most front side)



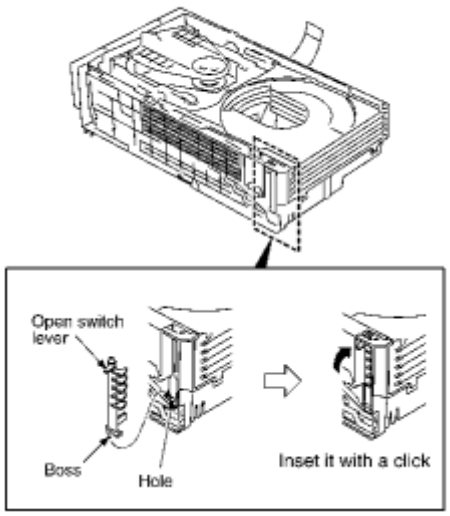
(Step 50)
Insert the rib of speed up lock into a groove of main gear, and lock it with 2 claws.



(Step 51)
Move the bottom tray to the arrow while pushing the top of the speed up gear. And insert it to a cog of the speed up gear.

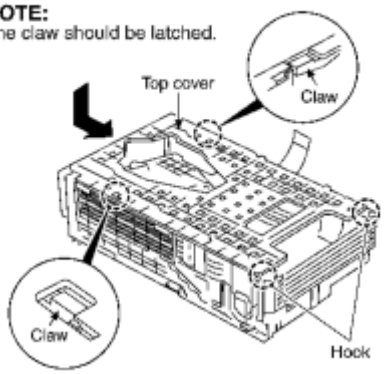


(Step 52)
Install the open switch lever.
(Put the boss into the hole of the mechanism base.)



(Step 53)
Install the top cover.
Fix it into hooks and slide direction to the arrow.

NOTE:
The claw should be latched.

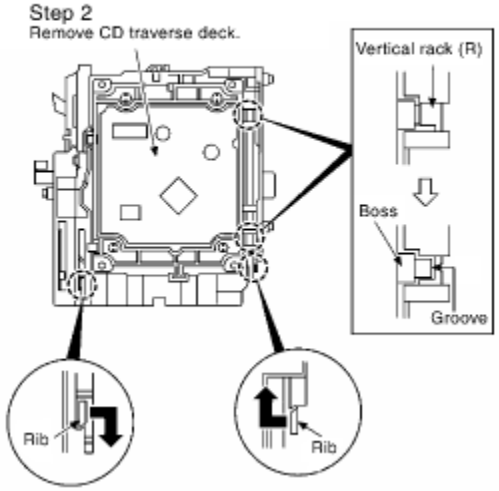


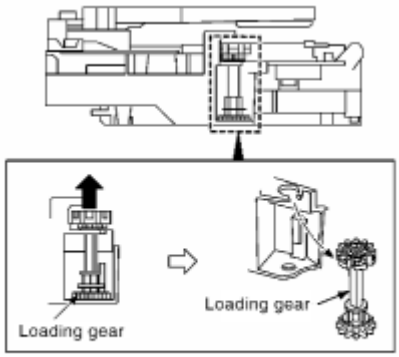
16.12 Disassembly of traverse mechanism

- Follow the (Step 1) - (Step 2) of Item 16.3.
- Follow the (Step 1) - (Step 2) of Item 16.4.
- Follow the (Step 1) - (Step 5) of Item 16.6.

Step 1
Shift ribs of both side to the arrow direction.
(A vertical rack (R) slides and groove opens)

Step 2
Remove CD traverse deck.

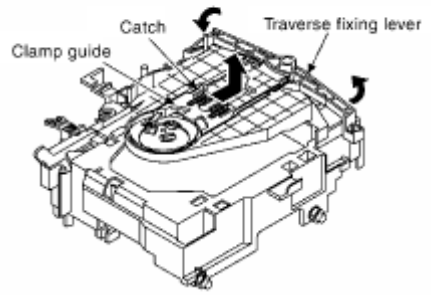




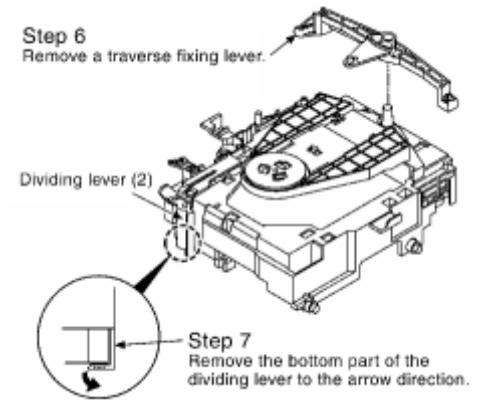
Step 3
Lift a loading gear slightly and pull out.

Step 4
Fixing lever to the arrow direction, rotate a traverse.

Step 5
Remove catch and take out a clamp guide.

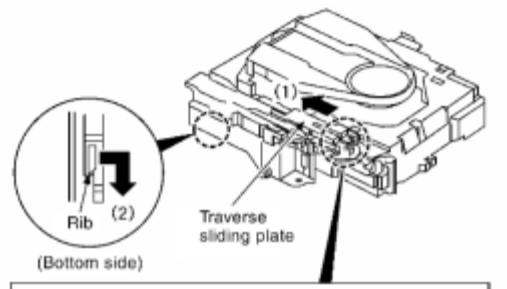


Step 6
Remove a traverse fixing lever.



Step 7
Remove the bottom part of the dividing lever to the arrow direction.

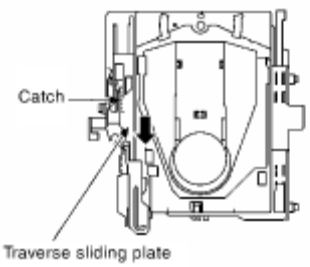
Step 8
Slide a traverse sliding plate to the arrow direction (1), and shift a rib to the arrow direction (2).



Step 9
Shifting a traverse sliding plate slightly and rotate a tray change lever.

Step 10
Remove a tray change lever.

Step 11
Holding the catch down, slide a traverse sliding plate to the arrow direction and remove it.



16.13 Removing the Cassette Tape Manually

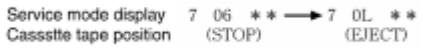
When electrical system failure occurs and a loaded cassette tape is stuck in the unit, follow the instruction below to remove it.

16.13.1 Removal by Compulsory Loading

(Available when service mode is on even when the power cannot be turned off.)

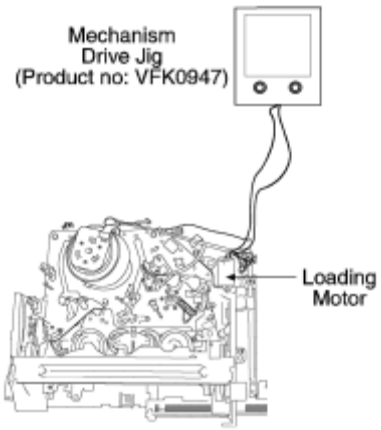
1. Press and hold down the "FF" and "EJECT" buttons at least three seconds then adjust the service number until appears as "7".
2. Press the "STOP" button to unload.

   (Carefully check for tape slack)

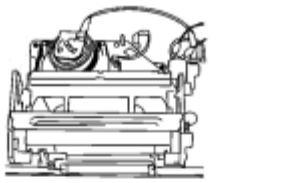


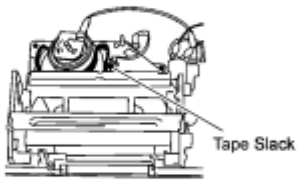
16.13.2 Removal by Use of Battery to Rotate Loading Motor

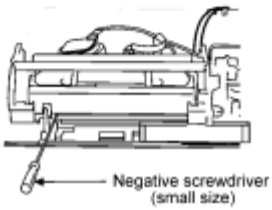
1. Unplug the power outlet, and remove the top panel and the front panel.
2. Use a mechanism drive jig (or three AA-size batteries connected in series) in order to supply 4.5V and to rotate the loading motor.



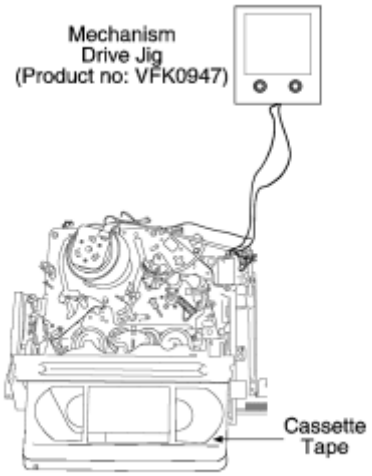
3. Suspend the unloading operation right before completion. Rotate the S-reel board with a negative screwdriver (small size) to remove tape slack.





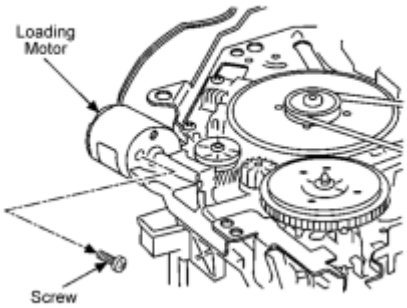


4. Restart the unloading operation to remove the cassette tape.

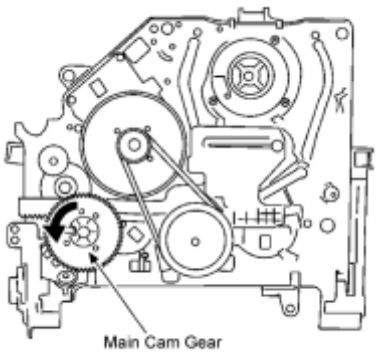


16.13.3 Removal of Mecha Unit then take out Cassette Tape

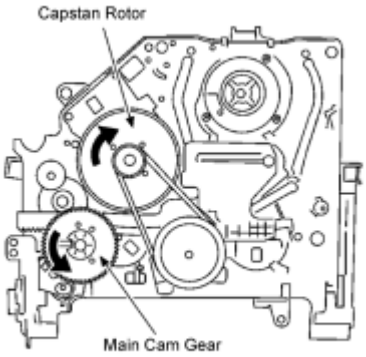
1. Unplug the power outlet and remove the top panel and the front panel.
2. Remove the VTR mechanism unit.
3. Remove the loading motor (remove a screw).



4. Rotate the main cam gear counterclockwise, and suspend the unloading operation right before completion.



5. Rotate the capstan rotor clockwise in order to remove tape slack. Rotate the main cam gear counterclockwise again and remove the cassette tape.



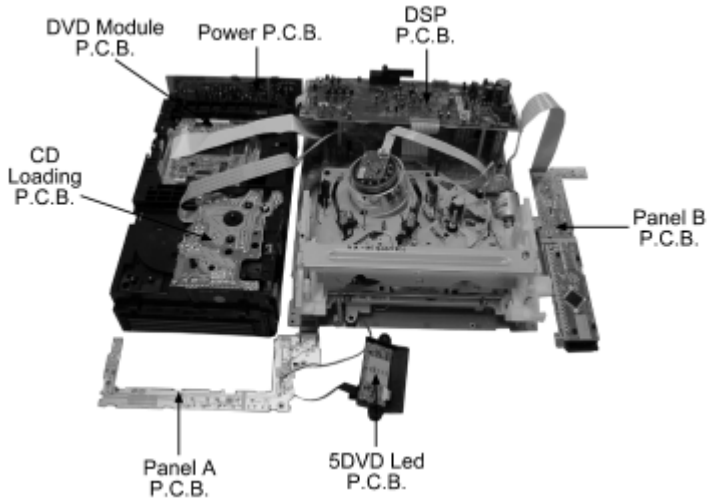
6. Reassemble the loading motor and the mechanical unit to the Main P.C.B. and securely fasten with the screws. (Refer to "Precaution to Be Taken During Installation of Traverse Deck Unit".)

17 Procedure for checking of the major P.C.B.

17.1 Checking the DVD Module P.C.B., DSP P.C.B., Power P.C.B., CD Loading P.C.B., Panel A P.C.B., Panel B P.C.B. and 5DVD Led P.C.B.

Preparation

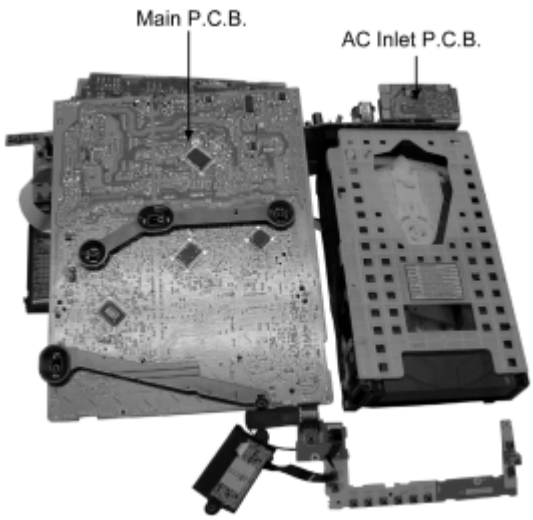
Follow items 16.1 to 16.7 of Disassembly Procedure (Refer to below diagram for service position 1).



17.2 Checking Main P.C.B. & AC Inlet P.C.B.

Preparation

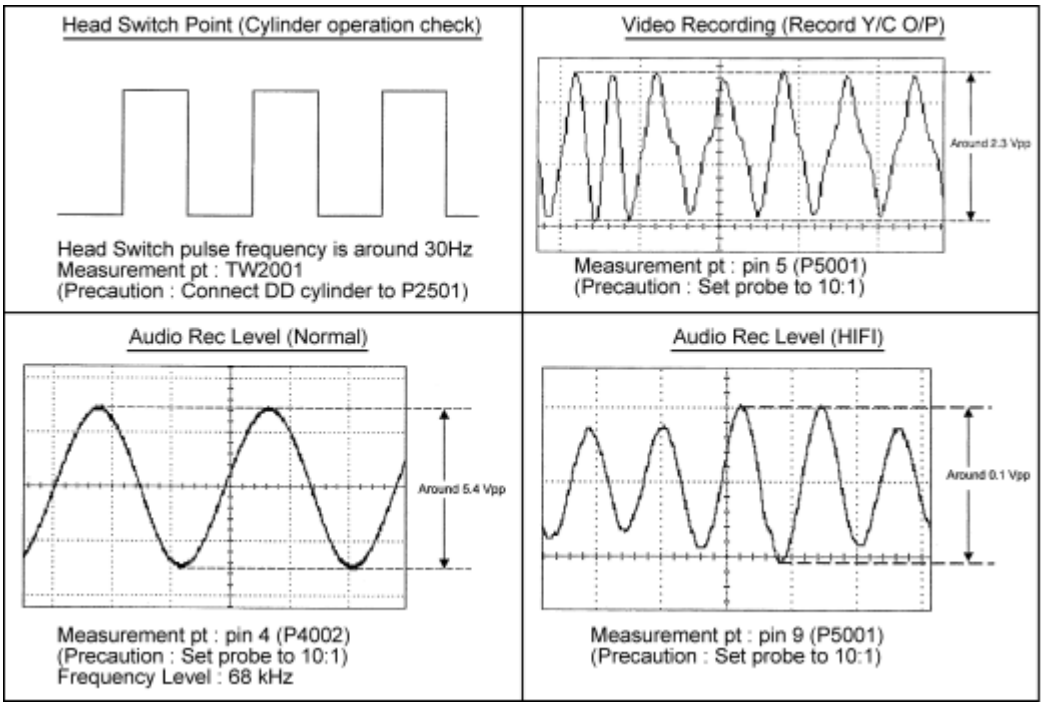
Follow items 16.1 to 16.7 of Disassembly Procedure (Refer to below diagram for service position 2).



18 Waveform Chart

18.1 Preparation Items

1. Test disc DVDT-S20
2. Video Analyzer
3. Digital Oscilloscope
4. RGB Encoder


Head Switch Point (Cylinder operation check)
Head Switch pulse frequency is around 30Hz
Measurement pt : TW2001
(Precaution : Connect DD cylinder to P2501)
Video Recording (Record Y/C O/P)
Around 2.3 Vpp
Measurement pt : pin 5 (P5001)
(Precaution : Set probe to 10:1)
Audio Rec Level (Normal)
Around 5.4 Vpp
Measurement pt : pin 4 (P4002)
(Precaution : Set probe to 10:1)
Frequency Level : 68 kHz
Audio Rec Level (HIFI)
Around 0.1 Vpp
Measurement pt : pin 9 (P5001)
(Precaution : Set probe to 10:1)

18.1.1 Procedures

1. Enable test mode ‘AC 01 EA’
2. Select ‘TUNER’ using R/C & press ‘FF search’ to change from VCR to DVD mode.
3. Play DVDT S20 test disc (T9)

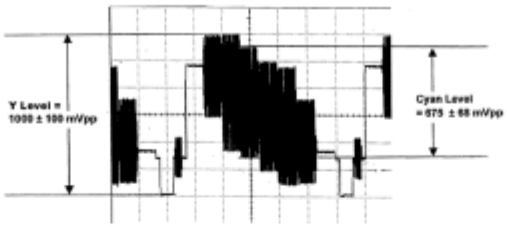
Note :

There should not be any abnormality on picture such as color dim or color too bright.

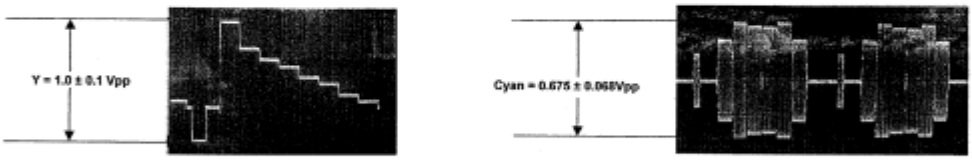
Precaution :

RGB component O/P should be 75Ω termination.

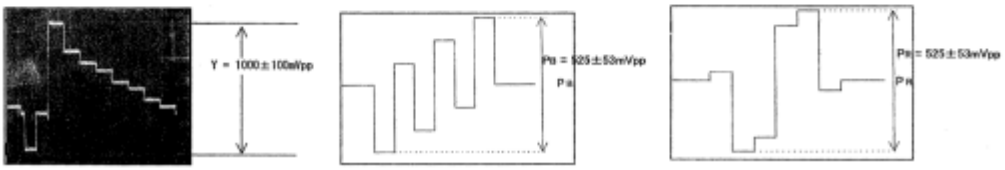
Video Output Level



S-Video O/P Level



RGB Component Output



19 Illustration of IC’s, Transistors and Diodes

20 Block Diagram

20.1 DVD Module Block

20.2 Main Block

21 Notes of Schematic Diagram

(All schematic diagrams may be modified at any time with the development of the new technology)

Note:

S1
: Stock switch

S2
: Play switch

S3
: Botton switch

S4
: Open switch

S5
: Change switch

S1531
: Safety Tab switch

S1532
: Mode switch

S7001
: Disc 5 switch

S7002
: Disc Change switch

S7003
: Disc 4 switch

S7005
: Disc 3. switch

S7006
: D.Play switch

S7007
: Disc 2 switch

S7008
: Stop switch

S7009
: Disc 1 switch

S7010
: Disc Check switch

S7011
: Selector switch

S7012
: Open/Close switch

S7013
: Power switch

S7016
: Play switch

S7017
: FF switch

S7018
: Stop switch

S7019
: Rew switch

S7020
: Channel Up switch

S7021
: Channel Down switch

S7023
: Rec switch

S7024

: Eject switch

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

- **Importance safety notice :**

  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer s specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

CAUTION:
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1101, 1.6A 125V FUSE
RISK OF FIRE-REPLACE FUSE AS MARKED.

22 Schematic Diagram

22.1 DVD Module Circuit

22.2 Main Circuit

22.3 Main Circuit

22.4 Main Circuit

22.5 Main Circuit

22.6 DSP Circuit

22.7 Power Circuit and AC Inlet

22.8 Panel B Circuit

22.9 5DVD LED Circuit and Panel A Circuit

22.10 CD Loading Circuit

22.11 VCR Deck Circuit

23 Printed Circuit Board

23.1 DVD Module P.C.B. (Side A and Side B)

23.2 Main P.C.B.

23.3 DSP P.C.B.

23.4 Power P.C.B. and AC Inlet P.C.B.

23.5 Panel B P.C.B.

23.6 5 DVD Led P.C.B. and Panel A P.C.B.

23.7 CD Loading P.C.B. and VCR Deck P.C.B.

24 Wiring Connection Diagram

25 Parts Location and Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.

  When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)

  Parts without these indications can be used for all areas.
- Warning: This product uses a laser diode. Refer to caution statements on "Precaution of Laser Diode".
- Capacitor values are in microfarads (µF) unless specified otherwise, P= Pico-farads (pF), F= Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

- [M] markings in the Remarks columns indicates parts supplied by **PAVCSG.**
- [SPC] markings in the Remarks columns indicates parts supplied by **SPC.**
- Reference for O/I book languages are as follows:

Ar :	Arabic	Du :	Dutch	It :	Italian	Sp :	Spanish
Cf :	Canadian French	En :	English	Ko :	Korean	Sw :	Swedish
Cz :	Czech	Fr :	French	Po :	Polish	Co :	Traditional Chinese
Da :	Danish	Ge :	German	Ru :	Russian	Cn :	Simplified Chinese
Pe :	Persian						

25.1 CD Loading Mechanism

25.1.1 CD Loading Mechanism Parts Location

25.1.2 CD Loading Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RDG0519	MAIN GEAR	[M]
302	RDG0520	SPEED UP GEAR	[M]
303	RDG0521	REVERSE GEAR	[M]
304	RDG0522	GENEVA GEAR	[M]
305	RDG0523	HOR RELAY GEAR	[M]
306	RDG0525	CROWN GEAR	[M]
307	RDG0526	TRAY RELAY GEAR	[M]
308	RDG0527	UD PULLEY GEAR	[M]
309	RDG0528	HOR SPEED DOWN GEAR	[M]

310	RDG0529	HOR SPEED DOWN GEAR	[M]
311	RDG0530	HOR DRIVE GEAR	[M]
312	RDG0531	LOAD RELAY GEAR	[M]
313	RDG0532	LOAD GEAR	[M]
314	RDG0535	UD SPEED DOWN GEAR	[M]
315	RDG0534	UD SPEED DOWN GEAR	[M]
316	RDG0536	S/SPEED DOWN GEAR	[M]
317	RDG0537	SELECT DRIVE GEAR	[M]
318	RDG0538	CHANGE GEAR	[M]
319	RDG0539	UD DRIVE GEAR	[M]
320	RDG0540	TIMING GEAR	[M]
321	RDG0542	TRAY GEAR	[M]
322	RDG0543	HOR PULLEY GEAR	[M]
323	RDV0068	HOR BELT	[M]
324	RDV0069	UD BELT	[M]
325	RME0344	UD ASSIST SPRING	[M]
326	RME0361	TRAY STOPPER SPRING	[M]
327	RME0363	LIMIT SPRING	[M]
328	RME0368	MAIN GEAR SPRING	[M]
329	RML0616	SPEED UP LOCK	[M]
330	RML0617	SEPARATE LEVER 1	[M]
331	RML0618	SEPARATE LEVER 2	[M]
332	RML0619-1	UD. CONNECTION LEVER	[M]
333	RML0620	TRV.CONNECT LEVER	[M]
334	RML0621	TRAY CHANGE LEVER	[M]
335	RML0622	TRAY LOCK LEVER	[M]
336	RML0623	OPEN SW. LEVER	[M]
337	RML0624	CHG. LEVER	[M]
338	RML0637	TRAY STOPPER	[M]
339	RMM0239	UD RACK L	[M]
340	RMM0240	UD.RACK [R]	[M]
341	RMM0241	TRV SLIDE PLATE (L)	[M]
342	RMM0242	TRV SLIDE PLATE (R)	[M]
343	RMM0243	SELECT RACK PART	[M]
344	RMM0244	SELECT GUIDE	[M]
345	RMQ1051	PITCH PLATE PART	[M]
346	RMQ1209	UD BASE	[M]
347	RMQ1056	TRAY GUIDE (L)	[M]
348	RMQ1057	TRAY GUIDE (R)	[M]
349	RMQ1058	GEAR HOLDER	[M]
350	RMQ1059	TOP COVER	[M]
351	RMQ1060	CLAMP GUIDE	[M]
352	RMQ1061	TG.PLATE	[M]
353	RMR1531-X	FIXTURE	[M]
354	RMR1446-X	CLAMPER	[M]
355	RMR1407A-H1	TRAY	[M]
356	RMR1407B-H1	TRAY	[M]
357	RMR1407C-H1	TRAY	[M]
358	RMR1407D-H1	TRAY	[M]
359	RMR1407E-H1	TRAY	[M]
360	RFKNAPM77MDS	MECHA BASE ASS'Y	[M]
361	RMS0762	TRAY GEAR SHAFT	[M]
362	RXG0053	TRAY DRIVE GEAR ASSY	[M]
363	RXQ0803	LOADING MOTOR ASS'Y	[M]
364	RXQ0804	UD MOTOR ASS'Y	[M]
365	XTB3+10J	SCREW	[M]
366	RMC0472	TRAY SPRING	[M]
367	XTV2+6G	SCREW	[M]
368	XWG6FFY	BACKYOKE	[M]

369	JSM0048	MAGNET	[M]
370	RMC0387	SUPPORT SPRING	[M]
371	XTBS26+8J	SCREW	[M]
401	RAE2008W-S	DT68 TRV SUB UNIT	[M]
402	RMG0598A-K	FLOATING RUBBER	[M]
403	RMG0617-H	CUSHION RUBBER A	[M]
404	RMG0618-H	CUSHION RUBBER B	[M]
405	RMR1596-K	MIDDLE CHASSIS	[M]
407	RMS0789	FIXED PIN	[M]

25.2 Cassette Mechanism

25.2.1 Cassette Mechanism Parts Location

25.2.2 Cassette Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	VEG1641-D	RDD CYLINDER	[M]
102	VEM0750	CAPSTAN UNIT	[M]
103	L1AZ00000004	FE HEAD UNIT	[M]
104	VDB1431	TENSION ARM BOSH	[M]
105	VDG1510	INTERMEDIATE GEAR	[M]
106	VDG1511	MAIN CAM GEAR	[M]
107	VDG1512	IDLER GEAR	[M]
108	VDG1514	CHANGE GEAR	[M]
109	VDR0372	REEL TABLE	[M]
110	VDV0391-1	CAPSTAN BELT	[M]
111	VEM0797	LOADING MOTOR UNIT	[M]
112	VMB3550	CHANGING GEAR SPRING	[M]
113	VMD4987	WORM BEARING 2	[M]
114	VMD4252	OPENER PIECE	[M]
115	VMD4253	LED PRISM	[M]
116	VML3624	MAIN LEVER	[M]
117	VML3626	PINCH CHARGE ARM	[M]
118	VML3632	IDLER ARM	[M]
119	VMX3092	P4 CAP	[M]
120	VXA7105	S SHAFT HOLDER UNIT	[M]
121	VXA7106	T SHAFT HOLDER UNIT	[M]
122	L1AE00000036	AC HEAD UNIT (HEXA.)	[M]
123	VMB3548	T BRAKE SPRING	[M]
124	VXL3107	S LOADING ARM UNIT	[M]
125	VXL3108	T LOADING ARM UNIT	[M]
126	VXL3109	PINCH ARM UNIT	[M]
127	VXL3110	P5 ARM UNIT	[M]
128	VXL3111	TENSION ARM UNIT	[M]
129	VXL3112	S BRAKE ARM UNIT	[M]
130	VXL3113	T BRAKE ARM UNIT	[M]
131	VXL3124	CHANGING LEVER UNIT	[M]
132	VXP2133	CENTER CLUTH UNIT	[M]
133	VXP2168	TORQUE CLUTCH UNIT	[M]
134	VMA0L25	TOP PLATE	[M]
135	VMD4255	SIDE PLATE L	[M]
136	VXA7109	SIDE PLATE R UNIT	[M]
137	VXA7110	CASSETTE HOLDER UNIT	[M]

138	VXL3160	MAIN SHAFT UNIT	[M]
139	VXA7311	SECTOR GEAR UNIT	[M]
140	VMD4983	FPC HOLDER	[M]
141	VML3706	OPENER LEVER	[M]
143	VMD4622	S DETECT ACTUATOR	[M]
146	VMX3196	CUT WASHER (C)	[M]
147	VMX2699	CUT WASHER	[M]
148	VMX2208	CUT WASHER	[M]
149	XTN26+7J	SCREW (CAPSTAN X3)	[M]
150	XYN3+C4	MOTOR FIXING SCREW	[M]
151	XTV26+5F	SCREW	[M]
152	XTV26+8FR-NC	SCREW 9SIDE)	[M]
153	VHD1117	DD SCREW	[M]
154	VHD1044	A/C SET SCREW	[M]
155	VMC1247-1	EARTH SPRING	[M]

25.3 Cabinet

25.3.1 Cabinet Parts Location

25.3.2 Cabinet Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RFKGAHT822PS	FRONT PANEL ASS'Y	[M]
1-1	RGKV0029	FRONT ORNAMENT	[M]
2	RGRV0008	REAR PANEL	[M]
3	RGUV0032	POWER BUTTON	[M]
4	RGUV0033	SELECTOR BUTTON	[M]
5	RGUV0034	TOP BUTTON	[M]
6	RGUV0035	DISK CHECK BUTTON	[M]
7	RGUV0036	VHS 1 BUTTON	[M]
8	RGUV0065	VHS 2 BUTTON	[M]
9	RGWV0002	VOLUME KNOB	[M]
10	RHD30070	EARTH TERMINAL	[M]
11	RJFV0001	FIP HOLDER	[M]
12	RKAV0001-S	SET LEG UNIT	[M]
13	RKFV0003	BLINDER PANEL	[M]
14	RKFV0015	DVD DOOR UNIT	[M]
15	RKMV0008	TOP PANEL	[M]
16	RMAV0003	DVD BRACKET	[M]
17	RMEV0002	DVD DOOR SPRING	[M]
18	RMNV0012	LED COVER	[M]
19	RMNV0013	PCB STAND	[M]
20	RMZV0004	POWER BARRIER	[M]
21	RXQV0005	CHASSIS FRAME UNIT	[M]
23	VHD1095	CYLINDER SCREW B	[M]
24	XSB3+5FC	SCREW RF	[M]
25	XTB3+6G	SCREW	[M]
26	XTB3+6J	SCREW	[M]
27	XTW3+6TFC	SCREW (TOP PANEL)	[M]

28	XTW3+6TR	SCREW MAIN	[M]
29	VWJ1652	AC HEAD FFC WIRE	[M]
30	VHD0690	SCREW	[M]
31	VHD1452-1	SCREW	[M]
32	VHD1453-1	SCREW	[M]
33	VMB2521	BLINDER SPRING	[M]
35	VMX3115	MECHA SPACER (F)	[M]
36	VMX3229	MECHA SPACER (R)	[M]
37	XTBS26+8J	SCREW	[M]
38	XTV26+5FR	SCREW	[M]
39	XTW3+10PR	SCREW (MECHA)	[M]
40	RMN0203	PCB SUPPORT	[M]
41	RMN0735	CONNECTOR HOLDER	[M]
42	RWJV0002	8P LED TO FRONT	[M]
43	RWJV0003	19 MSIN TO FRONT A	[M]
44	RWJV0004	50P FFC BE-MAIN	[M]
45	RWJV0005	14P FFC TRAVERSE	[M]
46	RWJV0006	30P FFC DSP-MAON	[M]
47	VWJ070W200MM	RDD FFC WIRE	[M]
48	VWJ12XW115MM	12P FFC DSP-MAIN	[M]
49	RMA1543	CD LID SUPPORT	[M]

25.4 Electrical Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		P.C.B.	
	REPV0021A	DVD MODULE P.C.B.	[M] (RTL)
	VEP02578A	VCR DECK P.C.B.	[M] (RTL)
	VEPV0001A	MAIN P.C.B.	[M] (RTL)
	VEPV0002A	DSP P.C.B.	[M] (RTL)
	VEPV0003A	AC INLET P.C.B.	[M] (RTL)
	VEPV0004A	POWER P.C.B.	[M] (RTL)
	VEPV0005A	PANEL A P.C.B.	[M] (RTL)
	VEPV0006A	PANEL B P.C.B.	[M] (RTL)
	VEPV0007A	5 DVD LED P.C.B.	[M] (RTL)
	REP3569A	CD LOADING P.C.B.	[M] (RTL)
		INTEGRATED CIRCUITS	
IC11	C0GAG0000007	IC UP/DOWN MOTOR DRIVE	[M]
IC21	C0GAG0000007	IC LOADING MOTOR DRIVE	[M]
IC201	C1AB00001472	IC CAPSTAN DRIVE	[M]
IC201	C2HBZC000013	IC DSP	[M]
IC202	KIA4558FEL	IC DUAL OP AMP	[M]
IC301	C0JBAR000326	IC LOGIC	[M]
IC302	C0ABCB000040	IC QUAD OP AMP	[M]
IC303	C1BB00000782	IC 4CH VOLUME	[M]
IC401	KIA4558FEL	IC OP AMP	[M]

IC402	M62456FPE1	IC SUPER BASS	[M]
IC403	C0ABCB000040	IC QUAD OP AMP	[M]
IC501	KIA4558FEL	IC DUAL OP AMP	[M]
IC701	KIA4558FEL	IC DUAL OP-AMP	[M]
IC1200	C0DAEJC00003	IC SHUNT REGULATOR	[M]
IC1511	B3NAA0000049	IC REEL SENSOR	[M]
IC1512	B3NAA0000049	IC REEL SENSOR	[M]
IC2501	C1AB00001479	IC CYL DRIVE	[M]
IC2502	C0DBZJG00005	IC REGULATOR	[M]
IC2601	C0JBAS000008	IC ANALOG SWITCH	[M]
IC3001	C1AB00001838	IC AV DECORDER	[M]
IC3703	C1AB00001192	IC SWITCHING	[M]
IC4501	AN3663FBP-AV	IC HI-FI	[M]
IC6001	C2CBHF000342	IC MICON	[M]
IC6201	C0EBH0000172	IC POWER DETECT	[M]
IC6301	C0DBCHD00002	IC REGULATOR	[M]
IC7201	C0HBB0000039	IC FL DRIVER	[M]
IC8001	MN2DS0003APH	IC DV2.1	[M]
IC8051	C3ABPG000067	IC 64 SDRAM	[M]
IC8111	C0CBCBD00018	IC 3.3V REGULATOR	[M]
IC8251	C0GBG0000044	IC MOTOR DRIVE	[M]
IC8271	C0GBF0000004	IC MOTOR DRIVE	[M]
IC8451	C0FBBK000036	IC AUDIO DAC	[M]
IC8601	C0EBE0000384	IC RESET	[M]
IC8605	C0EBA0000031	IC RESET	[M]
IC8651	RFKFMH81T160	IC FLASH ROM	[SPC]
IC8691	C0JBCA000066	IC AND GATE LOGIC	[M]
IC8695	C0JBCA000066	IC AND GATE LOGIC	[M]
IC33001	C0DBZHG00013	IC DC-DC CONVERTER	[M]
IC33002	C0DBEKG00003	IC REGULATOR	[M]
IC33501	C9ZB00000431	IC MICROCONTROLLER	[M]
IC36001	C2CBJG000414	IC MICRO-P	[M]
IC36003	C0EBH0000172	IC POWER DETECT	[M]
		TRANSISTORS	
Q1	B3NAA0000068	TRANSISTOR	[M]
Q401	B1GFGCAA0001	TRANSISTOR	[M]
Q402	B1GFGCAA0001	TRANSISTOR	[M]
Q403	B1GFGCAA0001	TRANSISTOR	[M]
Q404	B1GFGCAA0001	TRANSISTOR	[M]
Q405	KTD1304TA	TRANSISTOR	[M]
Q406	KRA110STA	TRANSISTOR	[M]
Q407	KRA110STA	TRANSISTOR	[M]
Q408	KRA110STA	TRANSISTOR	[M]
Q409	KRA110STA	TRANSISTOR	[M]
Q410	KRA110STA	TRANSISTOR	[M]
Q411	KRA110STA	TRANSISTOR	[M]
Q412	KTC3875GRTA	TRANSISTOR	[M]
Q601	2SB14170QA	TRANSISTOR	[M]
Q602	B1ABCF000011	TRANSISTOR	[M]
Q603	2SB621ARSTA	TRANSISTOR	[M]
Q604	B1ABCF000011	TRANSISTOR	[M]
Q605	B1GDCFJJ0002	TRANSISTOR	[M]
Q606	B1GBCFJN0004	TRANSISTOR	[M]
Q607	KTC3875GRTA	TRANSISTOR	[M]
Q608	KTC3875GRTA	TRANSISTOR	[M]
Q609	KTA1046	TRANSISTOR	[M]
Q610	KTC2026	TRANSISTOR	[M]
Q611	B1ADCF000001	TRANSISTOR	[M]
Q1150	B1DEDQ000014	TRANSISTOR	[M]

Q1151	2SC3311ASA	TRANSISTOR	[M]
Q1152	2SC3311ASA	TRANSISTOR	[M]
Q1153	B1DEDQ000014	TRANSISTOR	[M]
Q1200	B3PBA0000078	TRANSISTOR	[M]
Q1351	B1AAGD000006	TRANSISTOR	[M]
Q1352	B1AAGD000006	TRANSISTOR	[M]
Q1354	B1AAGD000006	TRANSISTOR	[M]
Q1501	PNA2604M01VT	TRANSISTOR	[M]
Q1502	PNA2604M01VT	TRANSISTOR	[M]
Q3001	2SD0601A0L	TRANSISTOR	[M]
Q3003	2SD0601A0L	TRANSISTOR	[M]
Q3701	2SB1218A0L	TRANSISTOR	[M]
Q4081	B1AAGD000006	TRANSISTOR	[M]
Q4082	2SD114900L	TRANSISTOR	[M]
Q4083	2SD0601A0L	TRANSISTOR	[M]
Q4084	2SB0710A0L	TRANSISTOR	[M]
Q6305	2SD0601A0L	TRANSISTOR	[M]
Q6306	2SD0601A0L	TRANSISTOR	[M]
Q7001	2SD0602A0L	TRANSISTOR	[M]
Q7501	KTC2026	TRANSISTOR	[M]
Q7701	UNR221500L	TRANSISTOR	[M]
Q7702	UNR211700L	TRANSISTOR	[M]
Q7703	UNR221500L	TRANSISTOR	[M]
Q7704	UNR211700L	TRANSISTOR	[M]
Q7705	UNR221500L	TRANSISTOR	[M]
Q7706	UNR211700L	TRANSISTOR	[M]
Q7707	UNR221500L	TRANSISTOR	[M]
Q7708	UNR211700L	TRANSISTOR	[M]
Q7709	UNR221500L	TRANSISTOR	[M]
Q7710	UNR211700L	TRANSISTOR	[M]
Q8550	2SB1219AHL	TRANSISTOR	[M]
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	2SB09700RL	TRANSISTOR	[M]
Q8560	2SD1819A0L	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	2SB09700RL	TRANSISTOR	[M]
Q8605	2SD1819A0L	TRANSISTOR	[M]
Q8606	2SD1819A0L	TRANSISTOR	[M]
Q33001	B1AAGD000006	TRANSISTOR	[M]
Q33003	2SC3940A0A	TRANSISTOR	[M]
Q33004	B1AAGD000006	TRANSISTOR	[M]
Q33006	2SD0602A0L	TRANSISTOR	[M]
Q33007	2SD0602A0L	TRANSISTOR	[M]
Q33008	2SD0601A0L	TRANSISTOR	[M]
Q33009	KRC103STA	TRANSISTOR	[M]
Q33010	2SC3940AHA	TRANSISTOR	[M]
Q34003	2SD0601A0L	TRANSISTOR	[M]
Q34004	2SB0709A0L	TRANSISTOR	[M]
QR3700	UNR521200L	CHIP TRANSISTOR	[M]
QR4081	UNR211100L	CHIP TRANSISTOR	[M]
QR4082	UNR221300L	CHIP TRANSISTOR	[M]
QR4504	UNR511300L	CHIP TRANSISTOR	[M]
QR4505	UNR521600L	CHIP TRANSISTOR	[M]
QR4506	UNR521600L	CHIP TRANSISTOR	[M]
QR4701	UNR521600L	CHIP TRANSISTOR	[M]
QR4702	UNR521600L	CHIP TRANSISTOR	[M]
QR4703	UNR511300L	CHIP TRANSISTOR	[M]
QR7201	UNR211200L	CHIP TRANSISTOR	[M]
QR7202	UNR221300L	CHIP TRANSISTOR	[M]

QR8420	UNR521100L	CHIP TRANSISTOR	[M]
QR8571	UNR511V00L	CHIP TRANSISTOR	[M]
QR33002	UNR211200L	CHIP TRANSISTOR	[M]
QR33003	UNR211200L	CHIP TRANSISTOR	[M]
QR33005	UNR211200L	CHIP TRANSISTOR	[M]
QR33012	UNR221300L	CHIP TRANSISTOR	[M]
QR33013	UNR221300L	CHIP TRANSISTOR	[M]
		DIODES	
D201	B0JCME000012	DIODE	[M]
D202	B0JCME000012	DIODE	[M]
D203	B0JCME000012	DIODE	[M]
D301	B0BC5R000009	DIODE	[M]
D302	B0BC5R000009	DIODE	[M]
D401	B0ACCK000005	DIODE	[M]
D402	B0ACCK000005	DIODE	[M]
D403	B0ACCK000005	DIODE	[M]
D404	B0ACCK000005	DIODE	[M]
D601	B0ADCC000002	DIODE	[M]
D602	B0ADCC000002	DIODE	[M]
D603	B0EAKM000117	DIODE	[M]
D604	B0BC5R000009	DIODE	[M]
D605	B0EAKM000117	DIODE	[M]
D606	B0ACCK000005	DIODE	[M]
D607	B0ADCJ000020	DIODE	[M]
D608	B0EAKM000117	DIODE	[M]
D609	B0EAKM000117	DIODE	[M]
D610	B0EAKM000117	DIODE	[M]
D611	B0EAKM000117	DIODE	[M]
D612	RL1N4003S-P	DIODE	[M]
D613	RL1N4003S-P	DIODE	[M]
D614	B0EAKM000117	DIODE	[M]
D615	UDZSTE178R2B	DIODE	[M]
D1110	D4EA7471A003	DIODE	[M] ⚠
D1140	B0KB00000013	DIODE	[M]
D1152	MA2C18500E	DIODE	[M]
D1155	MA2C165001VT	DIODE	[M]
D1157	MAZ40360MF	DIODE	[M]
D1180	MAZ751000C	DIODE	[M]
D1210	B0HAGM000006	DIODE	[M]
D1230	MA2C18500E	DIODE	[M]
D1240	B0JAME000037	DIODE	[M]
D1241	B0JAME000037	DIODE	[M]
D1250	B0JAMK000015	DIODE	[M]
D1251	B0JAMK000015	DIODE	[M]
D1260	B0JAPE000008	DIODE	[M]
D1261	B0JAPE000008	DIODE	[M]
D1270	MA2C18500E	DIODE	[M]
D1280	B0JAME000037	DIODE	[M]
D1290	B0JAMK000015	DIODE	[M]
D1291	B0JAMK000015	DIODE	[M]
D1351	MAZ4056NHF	DIODE	[M]
D1501	B3EA00000072	DIODE	[M]
D2001	B0AAED000003	DIODE	[M]
D2002	B0AAED000003	DIODE	[M]
D4501	MA2C165001VT	DIODE	[M]
D6302	B0JACE000001	DIODE	[M]
D6305	MAZ4062NLF	DIODE	[M]
D6306	MAZ4056NHF	DIODE	[M]

D7201	MAZ4240NMF	DIODE	[M]
D7202	B0AAED000003	DIODE	[M]
D7501	B0BA9R000007	DIODE	[M]
D7601	MAZ4300NMF	DIODE	[M]
D7701	B3AKB0000016	DIODE	[M]
D7702	B3AKB0000016	DIODE	[M]
D7703	B3AKB0000016	DIODE	[M]
D7704	B3AKB0000016	DIODE	[M]
D7705	B3AKB0000016	DIODE	[M]
D7751	B0JACE000001	DIODE	[M]
D7752	MA2C700A0F	DIODE	[M]
D7753	B0AAED000003	DIODE	[M]
D7754	B0JACE000001	DIODE	[M]
D8550	MA2S11100L	DIODE	[M]
D8571	MA2J72800L	DIODE	[M]
D33001	MAZ4056NHF	DIODE	[M]
D33002	B0JAME000025	DIODE	[M]
D33003	MAZ4130NLF	DIODE	[M]
D33004	MAZ4062NLF	DIODE	[M]
D33005	B0EAKL000031	DIODE	[M]
D33006	B0EAKL000031	DIODE	[M]
D33007	B0EAKL000031	DIODE	[M]
D33008	MAZ4062NLF	DIODE	[M]
D33009	B0BA7R900004	DIODE	[M]
D34001	MAZ4075NHF	DIODE	[M]
D34011	B0AAED000003	DIODE	[M]
D36001	MAZ4075NHF	DIODE	[M]
D36002	B0JACE000001	DIODE	[M]
D36003	B0JACE000001	DIODE	[M]
D36004	B0JACE000003	DIODE	[M]
D36005	B0JACE000001	DIODE	[M]
D36006	B0JACE000001	DIODE	[M]
D36010	B0JACE000001	DIODE	[M]
D36012	B0JACE000001	DIODE	[M]
D36013	MA2C700A0F	DIODE	[M]
		CHIP INDUCTORS	
LB1120	VLP0056-T	BEED CORE	[M]
LB1211	J0JHC0000012	CHIP INDUCTOR	[M]
LB1213	J0JHC0000012	CHIP INDUCTOR	[M]
LB3700	ERJ3GEY0R00V	0 1/16W	[M]
LB3701	ERJ3GEY0R00V	0 1/16W	[M]
LB3702	ERJ3GEY0R00V	0 1/16W	[M]
LB3703	ERJ3GEY0R00V	0 1/16W	[M]
LB3704	ERJ3GEY0R00V	0 1/16W	[M]
LB4701	ERJ3GEY0R00V	0 1/16W	[M]
LB4702	ERJ3GEY0R00V	0 1/16W	[M]
LB4703	ERJ3GEY0R00V	0 1/16W	[M]
LB4704	ERJ3GEY0R00V	0 1/16W	[M]
LB8001	J0JHC0000045	CHIP INDUCTOR	[M]
LB8002	J0JHC0000045	CHIP INDUCTOR	[M]
LB8011	ERJ3GEYJ220V	22 1/16W	[M]
LB8271	ERJ3GEY0R00V	0 1/16W	[M]
LB8272	ERJ3GEY0R00V	0 1/16W	[M]
LB8273	ERJ3GEY0R00V	0 1/16W	[M]
LB8301	J0JCC0000119	FERRITE BEAD	[M]
LB8302	J0JCC0000119	FERRITE BEAD	[M]
LB8303	J0JCC0000119	FERRITE BEAD	[M]
LB8304	J0JCC0000119	FERRITE BEAD	[M]
LB8305	J0JCC0000119	FERRITE BEAD	[M]

LB8401	ERJ3GEYJ151V	150 1/16W	[M]
LB8420	J0JCC0000091	FILTER	[M]
LB8421	J0JCC0000119	FERRITE BEAD	[M]
LB8422	J0JCC0000119	FERRITE BEAD	[M]
LB8423	ERJ3GEY0R00V	0 1/16W	[M]
LB8424	J0JCC0000091	FILTER	[M]
LB8451	J0JCC0000119	FERRITE BEAD	[M]
LB8452	J0JCC0000119	FERRITE BEAD	[M]
LB8453	J0JCC0000119	FERRITE BEAD	[M]
LB8454	J0JCC0000119	FERRITE BEAD	[M]
LB8455	J0JCC0000119	FERRITE BEAD	[M]
LB8456	J0JCC0000119	FERRITE BEAD	[M]
LB8491	J0JCC0000119	FERRITE BEAD	[M]
LB8501	ERJ3GEYJ222V	2.2K 1/16W	[M]
LB8502	J0JHC0000045	CHIP INDUCTOR	[M]
LB8503	ERJ3GEY0R00V	0 1/16W	[M]
LB8504	J0JCC0000091	FILTER	[M]
LB8505	J0JCC0000091	FILTER	[M]
LB8506	ERJ3GEYJ152V	1.5K 1/16W	[M]
LB8507	J0JCC0000091	FILTER	[M]
LB8511	ERJ3GEY0R00V	0 1/16W	[M]
LB8512	ERJ3GEY0R00V	0 1/16W	[M]
LB8513	ERJ3GEY0R00V	0 1/16W	[M]
LB8514	ERJ3GEY0R00V	0 1/16W	[M]
LB8690	J0JCC0000091	FILTER	[M]
LB8691	ERJ3GEYJ101V	100 1/16W	[M]
LB8692	ERJ3GEYJ101V	100 1/16W	[M]
LB8693	ERJ3GEYJ101V	100 1/16W	[M]
LB33001	J0JCC0000188	CHIP COIL	[M]
LB33002	ERJ3GEY0R00V	0 1/16W	[M]
LB33003	ERJ3GEY0R00V	0 1/16W	[M]
LB33004	ERJ3GEY0R00V	0 1/16W	[M]
LB33005	ERJ3GEY0R00V	0 1/16W	[M]
LB33006	J0JHC0000021	CHIP COIL	[M]
LB33007	ERJ3GEY0R00V	0 1/16W	[M]
LB33008	ERJ3GEY0R00V	0 1/16W	[M]
LB33009	ERJ3GEY0R00V	0 1/16W	[M]
LB33010	J0JCC0000188	CHIP COIL	[M]
LB33011	J0JCC0000188	CHIP COIL	[M]
LB33012	J0JCC0000188	CHIP COIL	[M]
LB33013	J0JCC0000188	CHIP COIL	[M]
LR1150	J1ZZA0000004	RESONANT SNUBBER	[M]
		VARIABLE RESISTOR	
VR7201	EVEKE2F3024B	VOLUME JOG	[M]
		SWITCHES	
S1	K0L1BA000065	SW STOCK	[M]
S2	K0L1BA000065	SW PLAY	[M]
S3	K0L1BA000078	SW BOTTOM	[M]
S4	RSH1A045-1A	SW OPEN	[M]
S5	K0L1BA000065	SW CHANGE	[M]
S1531	K0C111A00006	SW SAFETY TAB	[M]
S1532	K0ZZ00000598	SW MODE	[M]
S7001	EVQ21405RJ	SW DISC 5	[M]
S7002	EVQ21405RJ	SW DISC CHANGE	[M]
S7003	EVQ21405RJ	SW DISC 4	[M]
S7005	EVQ21405RJ	SW DISC 3	[M]
S7006	EVQ21405RJ	SW D. PLAY	[M]
S7007	EVQ21405RJ	SW DISC 2	[M]

S7008	EVQ21405RJ	SW STOP	[M]
S7009	EVQ21405RJ	SW DISC 1	[M]
S7010	EVQ21405RJ	SW DISC CHECK	[M]
S7011	EVQ21405RJ	SW SELECTOR	[M]
S7012	EVQ21405RJ	SW OPEN/CLOSE	[M]
S7013	EVQ21405RJ	SW POWER	[M]
S7016	EVQ21405RJ	SW PLAY	[M]
S7017	EVQ21405RJ	SW FF	[M]
S7018	EVQ21405RJ	SW STOP	[M]
S7019	EVQ21405RJ	SW REW	[M]
S7020	EVQ21405RJ	SW CHANNEL UP	[M]
S7021	EVQ21405RJ	SW CHANNEL DOWN	[M]
S7023	EVQ21405RJ	SW REC	[M]
S7024	EVQ21405RJ	SW EJECT	[M]
		CONNECTORS	
CN1	K1MN14B00066	14P FFC CONNECTOR	[M]
CN101	K1MN12A00049	12P FFC CONNECTOR	[M]
CN401	RJS2A4230-F	30P FFC CONNECTOR	[M]
CN402	K1FB125B0097	25P CONNECTOR	[M]
FP8101	K1MN50B00031	50P CONNECTOR	[M]
FP8271	K1MN15B00041	15P CONNECTOR	[M]
FP8501	K1MN26B00094	26P CONNECTOR	[M]
P201	K1KB08A00078	8P CONNECTOR	[M]
P1102	K1KB14B00026	14P CONNECTOR	[M] ⚠
P1531	K1KA02A00375	LOADING MOTOR WIRE	[M]
P2501	K1MN07A00020	7P CONNECTOR	[M]
P2571	K1KA08A00290	8P CONNECTOR	[M]
P4001	K1MZ02A00003	2P CONNECTOR	[M]
P4002	RJS1A9406	CONNECTOR	[M]
P5001	K1MN09A00029	9P CONNECTOR	[M]
P7201	K1MN19B00072	19P FFC	[M]
P7202	K1KB12B00039	12P CONNECTOR	[M]
P7203	K1MN08B00096	8P CONNECTOR	[M]
P7502	K1KA10A00263	10P CONNECTOR	[M]
P7701	K1MN08B00116	8P CONNECTOR	[M]
P31001	K1KA14A00127	14P CONNECTOR	[M]
P36001	K1MN19A00036	19P FFC CONNECTOR	[M]
P36002	K1KA12A00191	12P CONNECTOR	[M]
P36004	K1MN50A00008	50P CONNECTOR	[M]
P36005	K1MN14A00090	14P CONNECTOR	[M]
P36007	K1MN12A00049	12P FFC CONNECTOR	[M]
P36008	K1MN30A00045	30P FFC CONNECTOR	[M]
		COILS & TRANSFORMERS	
L601	G0C100JA0030	INDUCTOR	[M]
L602	G0A200D00002	RF CHOKE COIL	[M]
L603	G0A200D00002	RF CHOKE COIL	[M]
L608	J0JCC0000124	CHIP COIL	[M]
L1120	G0B233D00002	LINE FILTER	[M] ⚠
L1121	G0B233D00002	LINE FILTER	[M] ⚠
L1240	G0A220G00018	COIL	[M]
L1250	G0A220G00018	COIL	[M]
L1260	G0A150G00003	COIL	[M]
L1290	G0A220G00018	COIL	[M]
L3001	G1C271JA0036	CHIP COIL	[M]
L3005	G0C120JA0019	COIL	[M]
L3301	G0C270JA0019	COIL	[M]
L3302	G0C680JA0019	COIL	[M]
L3303	G0C270JA0019	COIL	[M]

L3705	G0C680JA0019	COIL	[M]
L4081	G0C471KA0004	COIL	[M]
L4501	G0C1R2J00004	COIL	[M]
L4502	G0C391JA0019	COIL	[M]
L5001	G0C680JA0019	COIL	[M]
L6001	G0C5R6JA0019	COIL	[M]
L7001	J0JBC0000019	CHIP INDUCTOR	[M]
L7003	J0JBC0000019	CHIP INDUCTOR	[M]
L7004	J0JBC0000019	CHIP INDUCTOR	[M]
L7005	J0JBC0000019	CHIP INDUCTOR	[M]
L7006	J0JBC0000019	CHIP INDUCTOR	[M]
L7200	G0C3R3JA0027	COIL	[M]
L7601	G0C100JA0030	INDUCTOR	[M]
L8201	G1C100K00020	CHIP INDUCTOR	[M]
L8202	J0JCC0000079	CHIP INDUCTOR	[M]
L8301	G1C100KA0055	CHIP INDUCTOR	[M]
L8302	J0JCC0000079	CHIP INDUCTOR	[M]
L8420	G1C220KA0055	CHIP INDUCTOR	[M]
L8550	G1C100KA0055	CHIP INDUCTOR	[M]
L33501	G0C220JA0019	COIL	[M]
L34001	G0C101JA0019	RF CHOKE COIL	[M]
L36001	G0C3R3JA0019	AXIAL COIL	[M]
T1150	G4D2A0000159	SW TRANSFORMER	[M] ⚠
T4081	EQQ7QF027Q	IF TRANSFORMER	[M] ⚠
B7751	VSB0205	BATTERY	[M]
IR7201	B3RAB0000025	REMOTE SENSOR	[M]
TU7502	ENG06802QF	TUNER PACK	[M]
TU7601	ENG36502G	TUNER	[M]
		OSCILLATORS	
X201	RSXZ36M8M01T	CRYSTAL OSCILLATOR	[M]
X3001	H0D357400067	CRYSTAL OSCILLATOR	[M]
X6001	H0D120500009	CRYSTAL OSCILLATOR	[M]
X6002	H0A327200064	CRYSTAL OSCILLATOR	[M]
X8621	H0J270500064	CRYSTAL	[M]
X36001	H2B100500004	CERAMIC RESONATOR	[M]
		DISPLAY TUBES	
FL4561	EFCT4R5MS5W	SIF CERAMIC FILTER	[M]
FL8101	F1H0J1050022	1 6.3V	[M]
FL8102	F1H0J1050022	1 6.3V	[M]
FL8103	F1H0J1050022	1 6.3V	[M]
FL8104	F1J1E1040022	0.1 25V	[M]
		FUSE	
F1101	K5D162AQ0004	1.6A FUSE	[M] ⚠
		FUSE PROTECTORS	
FP601	K5G402AA0002	FUSE PROTECTOR	[M] ⚠
FP602	K5G102AA0002	FUSE PROTECTOR	[M] ⚠
IP1240	K5G252AA0003	FUSE PROTECTOR	[M] ⚠
		FUSE HOLDERS	
ZA1103	EYF52BC	FUSE HOLDER	[M]
ZA1104	EYF52BC	FUSE HOLDER	[M]
		FL DISPLAY	
DP7201	A2BD00000083	FIP DISPLAY	[M]
		JACKS	
JK3701	K2HA612B0039	2P RCA PIN	[M]
JK3702	K1CB105B0037	JK VIDEO	[M]
JK3703	K2HA103B0022	JK I/O JACK	[M]

JK7001	RJJ37TK07-X	JK HEADPHONE	[M]
P1101	K2AB2B000002	JK AC INLET	[M] ⚠
		CHIP RESISTORS	
W105	ERJ3GEY0R00V	0 1/16W	[M]
W106	ERJ3GEY0R00V	0 1/16W	[M]
W108	ERJ3GEY0R00V	0 1/16W	[M]
W118	ERJ3GEY0R00V	0 1/16W	[M]
W201	ERJ3GEY0R00V	0 1/16W	[M]
W301	ERJ3GEY0R00V	0 1/16W	[M]
W302	ERJ3GEY0R00V	0 1/16W	[M]
W401	ERJ3GEY0R00V	0 1/16W	[M]
W402	ERJ3GEY0R00V	0 1/16W	[M]
W403	ERJ3GEY0R00V	0 1/16W	[M]
W501	ERJ6GEY0R00V	0 1/10W	[M]
W502	ERJ6GEY0R00V	0 1/10W	[M]
W503	ERJ3GEY0R00V	0 1/16W	[M]
W504	ERJ6GEY0R00V	0 1/10W	[M]
W505	ERJ6GEY0R00V	0 1/10W	[M]
W506	ERJ3GEY0R00V	0 1/16W	[M]
W506	ERJ6GEY0R00V	0 1/10W	[M]
W507	ERJ6GEY0R00V	0 1/10W	[M]
W508	ERJ3GEY0R00V	0 1/16W	[M]
W508	ERJ6GEY0R00V	0 1/10W	[M]
W509	ERJ3GEY0R00V	0 1/16W	[M]
W509	ERJ6GEY0R00V	0 1/10W	[M]
W510	ERJ6GEY0R00V	0 1/10W	[M]
W511	ERJ3GEY0R00V	0 1/16W	[M]
W512	ERJ6GEY0R00V	0 1/10W	[M]
W513	ERJ6GEY0R00V	0 1/10W	[M]
W514	ERJ6GEY0R00V	0 1/10W	[M]
W515	ERJ6GEY0R00V	0 1/10W	[M]
W516	ERJ3GEY0R00V	0 1/16W	[M]
W517	ERJ3GEY0R00V	0 1/16W	[M]
W518	ERJ6GEY0R00V	0 1/10W	[M]
W519	ERJ3GEY0R00V	0 1/16W	[M]
W520	ERJ3GEY0R00V	0 1/16W	[M]
W523	ERJ6GEY0R00V	0 1/10W	[M]
W524	ERJ6GEY0R00V	0 1/10W	[M]
W525	ERJ6GEY0R00V	0 1/10W	[M]
W526	ERJ6GEY0R00V	0 1/10W	[M]
W527	ERJ6GEY0R00V	0 1/10W	[M]
W528	ERJ6GEY0R00V	0 1/10W	[M]
W529	ERJ6GEY0R00V	0 1/10W	[M]
W530	ERJ6GEY0R00V	0 1/10W	[M]
W531	ERJ3GEY0R00V	0 1/16W	[M]
W532	ERJ6GEY0R00V	0 1/10W	[M]
W535	ERJ3GEY0R00V	0 1/16W	[M]
W536	ERJ6GEY0R00V	0 1/10W	[M]
W537	ERJ6GEY0R00V	0 1/10W	[M]
W538	ERJ3GEY0R00V	0 1/16W	[M]
W540	ERJ3GEY0R00V	0 1/16W	[M]
W541	ERJ3GEY0R00V	0 1/16W	[M]
W542	ERJ3GEY0R00V	0 1/16W	[M]
W543	ERJ3GEY0R00V	0 1/16W	[M]
W544	ERJ3GEY0R00V	0 1/16W	[M]
W545	ERJ6GEY0R00V	0 1/10W	[M]
W547	ERJ3GEY0R00V	0 1/16W	[M]
W548	ERJ3GEY0R00V	0 1/16W	[M]

W549	ERJ3GEY0R00V	0 1/16W	[M]
W551	ERJ6GEY0R00V	0 1/10W	[M]
W7701	ERJ6GEY0R00V	0 1/10W	[M]
W7702	ERJ6GEY0R00V	0 1/10W	[M]
W7703	ERJ6GEY0R00V	0 1/10W	[M]
W7704	ERJ6GEY0R00V	0 1/10W	[M]
W7705	ERJ6GEY0R00V	0 1/10W	[M]
W7706	ERJ6GEY0R00V	0 1/10W	[M]
W7707	ERJ6GEY0R00V	0 1/10W	[M]
W7708	ERJ6GEY0R00V	0 1/10W	[M]
		RESISTORS	
R106	ERJ3GEYJ562V	5.6K 1/16W	[M]
R107	ERJ3GEYJ472V	4.7K 1/16W	[M]
R110	ERJ3GEYJ562V	5.6K 1/16W	[M]
R111	ERJ3GEYJ222V	2.2K 1/16W	[M]
R117	ERJ3GEYJ123V	12K 1/16W	[M]
R118	ERJ3GEYJ123V	12K 1/16W	[M]
R119	ERJ3GEYJ153V	15K 1/16W	[M]
R120	ERJ3GEYJ123V	12K 1/16W	[M]
R122	ERJ3GEYJ332V	3.3K 1/16W	[M]
R123	ERJ3GEYJ332V	3.3K 1/16W	[M]
R124	ERJ3GEYJ332V	3.3K 1/16W	[M]
R133	ERJ3GEYJ332V	3.3K 1/16W	[M]
R136	ERJ3GEYJ473V	47K 1/16W	[M]
R137	ERJ3GEYJ473V	47K 1/16W	[M]
R138	ERJ3GEYJ473V	47K 1/16W	[M]
R139	ERJ3GEYJ473V	47K 1/16W	[M]
R140	ERJ3GEYJ473V	47K 1/16W	[M]
R141	ERJ3GEYJ473V	47K 1/16W	[M]
R201	ERJ3GEYJ472V	4.7K 1/16W	[M]
R201	ERJ6GEYJ181V	180 1/10W	[M]
R202	ERJ3GEYJ472V	4.7K 1/16W	[M]
R202	ERJ6GEYF912V	9.1K 1/10W	[M]
R203	D0GZR91JA001	0.91 1/16W	[M]
R203	ERJ3GEYJ332V	3.3K 1/16W	[M]
R204	ERJ3GEYJ332V	3.3K 1/16W	[M]
R205	D0GZR91JA001	0.91 1/16W	[M]
R205	ERJ3GEYJ472V	4.7K 1/16W	[M]
R206	ERJ3GEYJ472V	4.7K 1/16W	[M]
R207	B4ABB0000013	RESISTOR	[M]
R207	ERJ3GEYJ332V	3.3K 1/16W	[M]
R208	B4ABB0000013	RESISTOR	[M]
R208	ERJ3GEYJ332V	3.3K 1/16W	[M]
R209	ERJ3GEYJ470V	47 1/16W	[M]
R209	EZMPX300F13	RESISTOR	[M]
R210	B4ABB0000013	RESISTOR	[M]
R210	ERJ3GEYJ221V	220 1/16W	[M]
R211	D0GB105JA002	1M 1/16W	[M]
R212	ERJ3GEYJ331V	330 1/16W	[M]
R213	D0GB271JA002	270 1/16W	[M]
R214	ERJ3GEYJ331V	330 1/16W	[M]
R215	ERJ3GEYJ331V	330 1/16W	[M]
R216	D0GB271JA002	270 1/16W	[M]
R217	ERJ3GEYJ472V	4.7K 1/16W	[M]
R218	ERJ3GEYJ104V	100K 1/16W	[M]
R219	ERJ3GEYJ392V	3.9K 1/16W	[M]
R220	ERJ3GEYJ392V	3.9K 1/16W	[M]
R221	D0GB271JA002	270 1/16W	[M]
R222	D0GB271JA002	270 1/16W	[M]

R223	ERJ3GEYJ223V	22K 1/16W	[M]
R224	ERJ3GEYJ223V	22K 1/16W	[M]
R225	ERJ3GEYJ472V	4.7K 1/16W	[M]
R226	ERJ3GEYJ472V	4.7K 1/16W	[M]
R227	ERJ3GEYJ223V	22K 1/16W	[M]
R228	ERJ3GEYJ223V	22K 1/16W	[M]
R301	ERJ3GEYJ182V	1.8K 1/16W	[M]
R302	ERJ3GEYJ332V	3.3K 1/16W	[M]
R303	ERJ3GEYJ392V	3.9K 1/16W	[M]
R304	ERJ3GEYJ392V	3.9K 1/16W	[M]
R305	ERJ3GEYJ333V	33K 1/16W	[M]
R306	ERJ3GEYJ333V	33K 1/16W	[M]
R307	ERJ3GEYJ333V	33K 1/16W	[M]
R308	ERJ3GEYJ332V	3.3K 1/16W	[M]
R309	ERJ3GEYJ332V	3.3K 1/16W	[M]
R310	ERJ3GEYJ333V	33K 1/16W	[M]
R311	ERJ3GEYJ391V	390 1/16W	[M]
R312	ERJ3GEYJ273V	27K 1/16W	[M]
R313	ERJ3GEYJ182V	1.8K 1/16W	[M]
R314	ERJ3GEYJ683V	68K 1/16W	[M]
R315	ERJ3GEYJ822V	8.2K 1/16W	[M]
R316	ERJ3GEYJ223V	22K 1/16W	[M]
R317	ERJ3GEYJ104V	100K 1/16W	[M]
R318	ERJ3GEYJ104V	100K 1/16W	[M]
R319	ERJ3GEYJ104V	100K 1/16W	[M]
R320	ERJ3GEYJ104V	100K 1/16W	[M]
R321	ERJ3GEYJ182V	1.8K 1/16W	[M]
R322	ERJ3GEYJ273V	27K 1/16W	[M]
R323	ERJ3GEYJ273V	27K 1/16W	[M]
R324	ERJ3GEYJ302V	3K 1/16W	[M]
R325	ERJ3GEYJ273V	27K 1/16W	[M]
R326	ERJ3GEYJ102V	1K 1/16W	[M]
R327	ERJ3GEYJ102V	1K 1/16W	[M]
R328	ERJ3GEYJ273V	27K 1/16W	[M]
R329	ERJ3GEYJ102V	1K 1/16W	[M]
R330	ERJ3GEYJ122V	1.2K 1/16W	[M]
R331	ERJ3GEYJ473V	47K 1/16W	[M]
R332	ERJ3GEYJ122V	1.2K 1/16W	[M]
R333	ERJ3GEYJ102V	1K 1/16W	[M]
R334	ERJ3GEYJ473V	47K 1/16W	[M]
R335	ERJ3GEYJ473V	47K 1/16W	[M]
R336	ERJ3GEYJ273V	27K 1/16W	[M]
R337	ERJ3GEYJ273V	27K 1/16W	[M]
R338	ERJ3GEYJ102V	1K 1/16W	[M]
R339	ERJ3GEYJ102V	1K 1/16W	[M]
R340	ERJ3GEYJ102V	1K 1/16W	[M]
R341	ERJ3GEYJ102V	1K 1/16W	[M]
R342	ERJ3GEYJ472V	4.7K 1/16W	[M]
R343	ERJ3GEYJ391V	390 1/16W	[M]
R344	ERJ3GEYJ222V	2.2K 1/16W	[M]
R345	ERJ3GEYJ222V	2.2K 1/16W	[M]
R346	ERJ3GEYJ272V	2.7K 1/16W	[M]
R347	ERJ3GEYJ682V	6.8K 1/16W	[M]
R348	ERJ3GEYJ152V	1.5K 1/16W	[M]
R349	ERJ3GEYJ272V	2.7K 1/16W	[M]
R350	ERJ3GEYJ152V	1.5K 1/16W	[M]
R351	ERJ3GEYJ563V	56K 1/16W	[M]
R352	ERJ3GEYJ333V	33K 1/16W	[M]
R401	ERJ3GEYJ563V	56K 1/16W	[M]

R402	ERJ3GEYJ222V	2.2K 1/16W	[M]
R403	ERJ3GEYJ332V	3.3K 1/16W	[M]
R404	ERJ3GEYJ222V	2.2K 1/16W	[M]
R405	ERJ3GEYJ563V	56K 1/16W	[M]
R406	ERJ3GEYJ472V	4.7K 1/16W	[M]
R407	ERJ3GEYJ822V	8.2K 1/16W	[M]
R408	ERJ3GEYJ563V	56K 1/16W	[M]
R409	ERJ3GEYJ822V	8.2K 1/16W	[M]
R410	ERJ3GEYJ563V	56K 1/16W	[M]
R411	ERJ3GEYJ222V	2.2K 1/16W	[M]
R412	ERJ3GEYJ822V	8.2K 1/16W	[M]
R413	ERJ3GEYJ222V	2.2K 1/16W	[M]
R414	ERJ3GEYJ563V	56K 1/16W	[M]
R415	ERJ3GEYJ333V	33K 1/16W	[M]
R416	ERJ3GEYJ563V	56K 1/16W	[M]
R417	ERJ3GEYJ333V	33K 1/16W	[M]
R418	ERJ3GEYJ822V	8.2K 1/16W	[M]
R419	ERJ3GEYJ220V	22 1/16W	[M]
R420	ERJ3GEYJ220V	22 1/16W	[M]
R421	ERJ3GEYJ220V	22 1/16W	[M]
R422	ERJ3GEYJ220V	22 1/16W	[M]
R423	ERJ3GEYJ473V	47K 1/16W	[M]
R424	ERJ3GEYJ473V	47K 1/16W	[M]
R425	ERJ3GEYJ333V	33K 1/16W	[M]
R426	ERJ3GEYJ333V	33K 1/16W	[M]
R427	ERJ3GEYJ332V	3.3K 1/16W	[M]
R428	ERJ3GEYJ332V	3.3K 1/16W	[M]
R429	ERJ3GEYJ103V	10K 1/16W	[M]
R431	ERJ3GEYJ332V	3.3K 1/16W	[M]
R432	ERJ3GEYJ102V	1K 1/16W	[M]
R433	ERJ3GEYJ682V	6.8K 1/16W	[M]
R434	ERJ3GEYJ682V	6.8K 1/16W	[M]
R435	ERJ3GEYJ220V	22 1/16W	[M]
R436	ERJ3GEYJ220V	22 1/16W	[M]
R437	ERJ3GEYJ220V	22 1/16W	[M]
R438	ERJ3GEYJ220V	22 1/16W	[M]
R439	ERJ3GEYJ472V	4.7K 1/16W	[M]
R440	ERJ3GEYJ563V	56K 1/16W	[M]
R441	ERJ3GEYJ153V	15K 1/16W	[M]
R442	ERJ3GEYJ104V	100K 1/16W	[M]
R443	ERJ3GEYJ561V	560 1/16W	[M]
R444	ERJ3GEYJ332V	3.3K 1/16W	[M]
R445	ERJ3GEYJ472V	4.7K 1/16W	[M]
R446	ERJ3GEYJ272V	2.7K 1/16W	[M]
R447	ERJ3GEYJ272V	2.7K 1/16W	[M]
R448	ERJ3GEYJ104V	100K 1/16W	[M]
R449	D0GB100JA002	10 1/16W	[M]
R450	D0GB100JA002	10 1/16W	[M]
R451	ERJ3GEYJ183V	18K 1/16W	[M]
R452	ERJ3GEYJ332V	3.3K 1/16W	[M]
R453	ERJ3GEYJ103V	10K 1/16W	[M]
R454	ERJ3GEYJ223V	22K 1/16W	[M]
R455	ERJ3GEYJ561V	560 1/16W	[M]
R456	ERJ3GEYJ154V	150K 1/16W	[M]
R457	ERJ3GEYJ393V	39K 1/16W	[M]
R458	ERJ3GEYJ472V	4.7K 1/16W	[M]
R459	ERJ3GEYJ822V	8.2K 1/16W	[M]
R460	ERJ3GEYJ472V	4.7K 1/16W	[M]
R461	ERJ3GEYJ273V	27K 1/16W	[M]

R462	ERJ3GEYJ273V	27K 1/16W	[M]
R463	ERJ3GEYJ273V	27K 1/16W	[M]
R464	ERJ3GEYJ273V	27K 1/16W	[M]
R465	ERJ3GEYJ273V	27K 1/16W	[M]
R466	ERJ3GEYJ273V	27K 1/16W	[M]
R467	ERJ3GEYJ104V	100K 1/16W	[M]
R468	D0GB563JA002	56K 1/16W	[M]
R469	D0GB563JA002	56K 1/16W	[M]
R470	D0GB563JA002	56K 1/16W	[M]
R471	D0GB563JA002	56K 1/16W	[M]
R472	D0GB563JA002	56K 1/16W	[M]
R473	D0GB563JA002	56K 1/16W	[M]
R474	ERJ3GEYJ223V	22K 1/16W	[M]
R475	ERJ3GEYJ472V	4.7K 1/16W	[M]
R476	ERJ3GEYJ474V	470K 1/16W	[M]
R477	ERJ3GEYJ102V	1K 1/16W	[M]
R478	ERJ3GEYJ223V	22K 1/16W	[M]
R479	ERJ3GEYJ332V	3.3K 1/16W	[M]
R480	ERJ3GEYJ333V	33K 1/16W	[M]
R481	ERJ3GEYJ182V	1.8K 1/16W	[M]
R482	ERJ3GEYJ182V	1.8K 1/16W	[M]
R483	ERJ3GEYJ103V	10K 1/16W	[M]
R484	ERJ3GEYJ182V	1.8K 1/16W	[M]
R485	ERJ3GEYJ182V	1.8K 1/16W	[M]
R486	ERJ3GEYJ182V	1.8K 1/16W	[M]
R487	ERJ3GEYJ102V	1K 1/16W	[M]
R488	ERJ3GEYJ102V	1K 1/16W	[M]
R489	ERJ3GEYJ472V	4.7K 1/16W	[M]
R490	ERJ3GEYJ101V	100 1/16W	[M]
R493	ERJ3GEYJ333V	33K 1/16W	[M]
R503	ERJ3GEYJ473V	47K 1/16W	[M]
R504	ERJ3GEYJ102V	1K 1/16W	[M]
R505	ERJ3GEYJ102V	1K 1/16W	[M]
R508	ERJ3GEYJ682V	6.8K 1/16W	[M]
R510	ERJ3GEYJ102V	1K 1/16W	[M]
R511	ERJ3GEYJ102V	1K 1/16W	[M]
R601	ERJ3GEYJ122V	1.2K 1/16W	[M]
R602	ERJ3GEYJ122V	1.2K 1/16W	[M]
R603	ERJ3GEYJ124V	120K 1/16W	[M]
R604	ERJ3GEYJ823V	82K 1/16W	[M]
R605	ERJ3GEYJ472V	4.7K 1/16W	[M]
R606	ERJ3GEYJ472V	4.7K 1/16W	[M]
R607	ERJ3GEYJ472V	4.7K 1/16W	[M]
R608	ERJ3GEYJ1R0V	1 1/16W	[M]
R609	ERJ3GEYJ1R0V	1 1/16W	[M]
R610	ERDS1FVJ820T	82 1/2W	[M]
R611	ERDS1FVJ820T	82 1/2W	[M]
R612	ERDS1FVJ820T	82 1/2W	[M]
R613	ERDS1FVJ820T	82 1/2W	[M]
R614	ERJ3GEYJ473V	47K 1/16W	[M]
R615	ERJ3GEYJ473V	47K 1/16W	[M]
R616	ERDS1FVJ5R6T	5.6 1/2W	[M]
R617	ERDS1FVJ5R6T	5.6 1/2W	[M]
R618	ERDS1FVJ5R6T	5.6 1/2W	[M]
R619	ERDS1FVJ5R6T	5.6 1/2W	[M]
R620	ERDS1FVJ4R7T	4.7 1/2W	[M]
R621	ERDS1FVJ4R7T	4.7 1/2W	[M]
R622	ERJ3GEYJ681V	680 1/16W	[M]
R623	ERJ3GEYJ471V	470 1/16W	[M]

R624	ERJ3GEYJ561V	560 1/16W	[M]
R625	ERJ3GEYJ272V	2.7K 1/16W	[M]
R626	ERJ3GEYJ272V	2.7K 1/16W	[M]
R627	ERJ3GEYJ561V	560 1/16W	[M]
R701	ERJ3GEYJ103V	10K 1/16W	[M]
R702	ERJ3GEYJ103V	10K 1/16W	[M]
R703	ERJ3GEYJ103V	10K 1/16W	[M]
R704	ERJ3GEYJ103V	10K 1/16W	[M]
R705	ERJ3GEYJ103V	10K 1/16W	[M]
R706	ERJ3GEYJ103V	10K 1/16W	[M]
R707	ERJ3GEYJ473V	47K 1/16W	[M]
R708	ERJ3GEYJ103V	10K 1/16W	[M]
R709	ERJ3GEYJ103V	10K 1/16W	[M]
R710	ERJ3GEYJ103V	10K 1/16W	[M]
R711	ERJ3GEYJ103V	10K 1/16W	[M]
R722	ERJ3GEYJ473V	47K 1/16W	[M]
R1150	ERDS2TJ105T	1M 1/4W	[M]
R1153	ERG1SJ331E	330 1W	[M]
R1154	ERDS2TJ105T	1M 1/4W	[M]
R1155	ERDS2TJ104T	100K 1/4W	[M]
R1156	ERDS2TJ330T	33 1/4W	[M]
R1157	ERJ6GEYG472V	4.7K 1/10W	[M]
R1158	ERDS2TJ331T	330 1/4W	[M]
R1159	ERDS2TJ3R3T	3.3 1/4W	[M]
R1160	ERX1SJR22E	0.22 1W	[M]
R1161	ERDS2TJ101T	100 1/4W	[M]
R1162	ERDS2FJ102T	1K 1/4W	[M]
R1163	ERDS2FJ101T	100 1/4W	[M]
R1200	ERJ6GEYG333V	33K 1/10W	[M]
R1201	ERJ6GEYG363V	36K 1/10W	[M]
R1202	ERJ6GEYG222V	2.2K 1/10W	[M]
R1203	ERJ6GEYG243V	24K 1/10W	[M]
R1204	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1205	ERJ3GEYJ222V	2.2K 1/16W	[M]
R1206	ERJ6GEYJ271V	270 1/10W	[M]
R1207	ERJ6GEYG224V	220K 1/10W	[M]
R1208	ERJ6GEYG822V	8.2K 1/10W	[M]
R1230	ERJ6GEYJ473V	47K 1/10W	[M]
R1351	ERDS2TJ471T	470 1/4W	[M]
R1501	ERJ3GEYJ273V	27K 1/16W	[M]
R1502	ERJ3GEYJ273V	27K 1/16W	[M]
R1503	ERDS2TJ151T	150 1/4W	[M]
R1511	ERJ3GEYJ273V	27K 1/16W	[M]
R1512	ERJ3GEYJ273V	27K 1/16W	[M]
R1513	ERJ6GEYJ121V	120 1/10W	[M]
R2001	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2002	ERJ3GEYJ105V	1M 1/16W	[M]
R2099	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2501	ERJ6GEYJ1R2V	1.2 1/10W	[M]
R2502	ERJ6GEYJ1R5V	1.5 1/10W	[M]
R2514	ERJ3GEYJ221V	220 1/16W	[M]
R2515	ERJ3GEYJ221V	220 1/16W	[M]
R2516	ERJ3GEYJ221V	220 1/16W	[M]
R2520	ERJ3GEYJ183V	18K 1/16W	[M]
R2521	ERJ3GEYJ102V	1K 1/16W	[M]
R2522	ERJ3GEYJ101V	100 1/16W	[M]
R2523	ERJ3GEYJ101V	100 1/16W	[M]
R2551	ERJ3GEYJ103V	10K 1/16W	[M]
R2552	ERJ3GEYJ103V	10K 1/16W	[M]

R2561	ERJ3GEYJ102V	1K 1/16W	[M]
R2562	ERJ3GEYJ473V	47K 1/16W	[M]
R2563	ERJ3GEYJ102V	1K 1/16W	[M]
R2601	ERJ3GEYJ821V	820 1/16W	[M]
R2602	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2603	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2604	ERJ3GEYJ821V	820 1/16W	[M]
R2605	ERJ3GEYJ103V	10K 1/16W	[M]
R2606	ERJ3GEYJ473V	47K 1/16W	[M]
R3001	ERJ3GEYJ622V	6.2K 1/16W	[M]
R3002	ERJ3GEYJ392V	3.9K 1/16W	[M]
R3003	ERJ3GEYJ152V	1.5K 1/16W	[M]
R3004	ERJ3GEYJ332V	3.3K 1/16W	[M]
R3005	ERJ3GEYJ222V	2.2K 1/16W	[M]
R3012	ERJ3GEYJ102V	1K 1/16W	[M]
R3013	ERJ3GEYJ273V	27K 1/16W	[M]
R3018	ERJ3GEYJ153V	15K 1/16W	[M]
R3020	ERJ3GEYJ152V	1.5K 1/16W	[M]
R3021	ERJ3GEYJ331V	330 1/16W	[M]
R3024	ERJ3GEYJ102V	1K 1/16W	[M]
R3025	ERJ3GEYJ332V	3.3K 1/16W	[M]
R3026	ERJ3GEYJ332V	3.3K 1/16W	[M]
R3032	ERJ3GEYJ685V	6.8M 1/16W	[M]
R3038	ERJ3GEYJ222V	2.2K 1/16W	[M]
R3041	ERJ3GEY0R00V	0 1/16W	[M]
R3700	ERJ3GEYJ332V	3.3K 1/16W	[M]
R3701	ERJ3GEYJ471V	470 1/16W	[M]
R3702	ERDS2TJ681T	680 1/4W	[M]
R3703	ERJ3GEYJ222V	2.2K 1/16W	[M]
R3704	ERJ3GEYJ103V	10K 1/16W	[M]
R3705	ERJ3GEYJ750V	75 1/16W	[M]
R3706	ERJ3GEYJ750V	75 1/16W	[M]
R3707	ERJ3GEYJ750V	75 1/16W	[M]
R3708	ERJ3GEYJ750V	75 1/16W	[M]
R3709	ERJ3GEYJ750V	75 1/16W	[M]
R3710	ERJ3GEYJ750V	75 1/16W	[M]
R3711	ERJ3GEYJ750V	75 1/16W	[M]
R4011	ERJ3GEYJ153V	15K 1/16W	[M]
R4012	ERJ3GEYJ223V	22K 1/16W	[M]
R4015	ERJ3GEYJ203V	20K 1/16W	[M]
R4061	D0GB334JA002	330K 1/16W	[M]
R4062	ERJ3GEYJ103V	10K 1/16W	[M]
R4063	ERJ3GEYJ201V	200 1/16W	[M]
R4071	ERJ3GEYJ153V	15K 1/16W	[M]
R4081	ERJ3GEYJ822V	8.2K 1/16W	[M]
R4082	D0GB332JA002	3.3K 1/16W	[M]
R4083	ERJ6GEYJ2R2V	2.2 1/10W	[M]
R4084	ERJ3GEYJ102V	1K 1/16W	[M]
R4085	ERJ3GEYJ102V	1K 1/16W	[M]
R4086	ERJ3GEYJ222V	2.2K 1/16W	[M]
R4087	ERJ3GEYJ222V	2.2K 1/16W	[M]
R4301	ERJ3GEYJ473V	47K 1/16W	[M]
R4302	ERJ3GEYJ473V	47K 1/16W	[M]
R4303	ERJ3GEYJ223V	22K 1/16W	[M]
R4304	ERJ3GEYJ223V	22K 1/16W	[M]
R4500	ERJ3GEYJ102V	1K 1/16W	[M]
R4502	ERJ3GEYJ473V	47K 1/16W	[M]
R4505	ERJ3GEYJ682V	6.8K 1/16W	[M]
R4508	ERJ3GEYJ102V	1K 1/16W	[M]

R4509	ERJ3GEYJ473V	47K 1/16W	[M]
R4510	ERJ3GEYJ682V	6.8K 1/16W	[M]
R4513	ERJ3GEYJ222V	2.2K 1/16W	[M]
R4525	ERJ3GEYJ102V	1K 1/16W	[M]
R4527	ERJ3GEY0R00V	0 1/16W	[M]
R4528	ERJ3GEY0R00V	0 1/16W	[M]
R4529	ERJ3GEYJ681V	680 1/16W	[M]
R4534	D0GB124JA002	120K 1/16W	[M]
R4538	D0GB333JA002	33K 1/16W	[M]
R4539	ERJ3GEYJ331V	330 1/16W	[M]
R4540	ERJ3GEYJ331V	330 1/16W	[M]
R4554	ERJ3GEYJ153V	15K 1/16W	[M]
R4558	ERJ3GEYJ153V	15K 1/16W	[M]
R4563	ERJ3GEYJ102V	1K 1/16W	[M]
R4581	ERJ3GEYJ471V	470 1/16W	[M]
R4582	ERJ3GEYJ471V	470 1/16W	[M]
R4601	ERJ3GEYJ333V	33K 1/16W	[M]
R4602	ERJ3GEYJ682V	6.8K 1/16W	[M]
R4701	ERJ3GEYJ471V	470 1/16W	[M]
R4702	ERJ3GEY0R00V	0 1/16W	[M]
R4703	ERJ3GEYJ471V	470 1/16W	[M]
R4704	ERJ3GEY0R00V	0 1/16W	[M]
R6001	ERJ3GEYJ102V	1K 1/16W	[M]
R6002	ERJ3GEYJ102V	1K 1/16W	[M]
R6003	ERJ3GEYJ223V	22K 1/16W	[M]
R6004	ERJ3GEYJ221V	220 1/16W	[M]
R6005	ERJ3GEYJ103V	10K 1/16W	[M]
R6006	ERJ3GEYJ183V	18K 1/16W	[M]
R6009	ERJ3GEYJ103V	10K 1/16W	[M]
R6010	ERJ3GEYJ103V	10K 1/16W	[M]
R6012	ERJ3GEYJ561V	560 1/16W	[M]
R6013	ERJ3GEYJ105V	1M 1/16W	[M]
R6016	ERJ3GEYJ103V	10K 1/16W	[M]
R6017	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6020	ERJ3GEYJ103V	10K 1/16W	[M]
R6021	ERJ3GEYJ103V	10K 1/16W	[M]
R6022	ERJ3GEYJ102V	1K 1/16W	[M]
R6026	ERJ3GEYJ332V	3.3K 1/16W	[M]
R6028	ERJ3GEYJ103V	10K 1/16W	[M]
R6029	ERJ3GEYJ103V	10K 1/16W	[M]
R6102	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6104	ERJ3GEYJ221V	220 1/16W	[M]
R6105	ERJ3GEYJ221V	220 1/16W	[M]
R6106	ERJ3GEYJ221V	220 1/16W	[M]
R6107	ERJ3GEYJ221V	220 1/16W	[M]
R6201	ERJ3GEYJ332V	3.3K 1/16W	[M]
R6307	ERJ6GEYJ222V	2.2K 1/10W	[M]
R6309	ERDS2TJ821T	820 1/4W	[M]
R6400	ERJ3GEYJ101V	100 1/16W	[M]
R6401	ERJ3GEYJ102V	1K 1/16W	[M]
R7001	ERJ3GEYJ272V	2.7K 1/16W	[M]
R7002	ERJ3GEYJ472V	4.7K 1/16W	[M]
R7003	ERJ3GEYJ222V	2.2K 1/16W	[M]
R7005	ERJ3GEYJ182V	1.8K 1/16W	[M]
R7006	ERJ3GEYJ122V	1.2K 1/16W	[M]
R7007	ERJ3GEYJ122V	1.2K 1/16W	[M]
R7008	ERJ3GEYJ102V	1K 1/16W	[M]
R7009	ERJ3GEYJ102V	1K 1/16W	[M]
R7010	ERJ3GEYJ102V	1K 1/16W	[M]

R7011	ERJ3GEYJ102V	1K 1/16W	[M]
R7013	ERDS2TJ681T	680 1/4W	[M]
R7023	ERJ3GEY0R00V	0 1/16W	[M]
R7024	ERJ3GEYJ102V	1K 1/16W	[M]
R7025	ERJ3GEYJ472V	4.7K 1/16W	[M]
R7026	ERJ3GEYJ182V	1.8K 1/16W	[M]
R7027	ERJ3GEYJ332V	3.3K 1/16W	[M]
R7028	ERJ3GEYJ472V	4.7K 1/16W	[M]
R7030	ERJ3GEYJ182V	1.8K 1/16W	[M]
R7031	ERJ3GEYJ102V	1K 1/16W	[M]
R7201	ERDS2TJ180T	18 1/4W	[M]
R7202	ERDS2TJ180T	18 1/4W	[M]
R7203	ERJ6GEYJ562V	5.6K 1/10W	[M]
R7205	ERJ3GEY0R00V	0 1/16W	[M]
R7206	ERJ3GEYJ102V	1K 1/16W	[M]
R7207	ERJ3GEYJ102V	1K 1/16W	[M]
R7208	ERJ3GEYJ102V	1K 1/16W	[M]
R7209	ERJ3GEYJ273V	27K 1/16W	[M]
R7210	ERJ3GEYJ103V	10K 1/16W	[M]
R7211	ERJ3GEYJ103V	10K 1/16W	[M]
R7212	ERJ3GEYJ103V	10K 1/16W	[M]
R7213	ERJ3GEYJ103V	10K 1/16W	[M]
R7214	ERJ3GEYJ103V	10K 1/16W	[M]
R7215	ERJ3GEYJ103V	10K 1/16W	[M]
R7216	ERJ3GEYJ103V	10K 1/16W	[M]
R7217	ERJ3GEYJ103V	10K 1/16W	[M]
R7218	ERJ3GEYJ103V	10K 1/16W	[M]
R7219	ERJ3GEYJ103V	10K 1/16W	[M]
R7220	ERJ3GEYJ103V	10K 1/16W	[M]
R7221	ERJ3GEYJ103V	10K 1/16W	[M]
R7222	ERJ3GEYJ103V	10K 1/16W	[M]
R7223	ERJ3GEYJ103V	10K 1/16W	[M]
R7224	ERJ3GEYJ103V	10K 1/16W	[M]
R7225	ERDS2TJ681T	680 1/4W	[M]
R7226	ERJ3GEYJ101V	100 1/16W	[M]
R7501	ERJ3GEYJ471V	470 1/16W	[M]
R7502	ERJ3GEYJ471V	470 1/16W	[M]
R7503	ERJ3GEYJ123V	12K 1/16W	[M]
R7504	ERJ3GEYJ123V	12K 1/16W	[M]
R7506	ERDS2TJ682T	6.8K 1/4W	[M]
R7601	ERDS2TJ331T	330 1/4W	[M]
R7602	ERJ3GEYJ101V	100 1/16W	[M]
R7603	ERJ3GEYJ101V	100 1/16W	[M]
R7604	ERJ3GEY0R00V	0 1/16W	[M]
R7701	ERJ6GEYG151V	150 1/10W	[M]
R7702	ERJ6GEYJ331V	330 1/10W	[M]
R7704	ERJ6GEYG151V	150 1/10W	[M]
R7705	ERJ6GEYJ331V	330 1/10W	[M]
R7707	ERJ6GEYG151V	150 1/10W	[M]
R7708	ERJ6GEYJ331V	330 1/10W	[M]
R7710	ERJ6GEYG151V	150 1/10W	[M]
R7711	ERJ6GEYJ331V	330 1/10W	[M]
R7713	ERJ6GEYG151V	150 1/10W	[M]
R7714	ERJ6GEYJ331V	330 1/10W	[M]
R7751	ERJ3GEYJ102V	1K 1/16W	[M]
R8011	ERJ3GEY0R00V	0 1/16W	[M]
R8021	ERJ2GEJ103X	10K 2W	[M]
R8022	ERJ2GEJ103X	10K 2W	[M]
R8023	ERJ2GEJ473X	47K 2W	[M]

R8041	ERJ2GEJ330X	33 2W	[M]
R8232	ERJ2GEJ103X	10K 2W	[M]
R8233	ERJ3GEYJ153V	15K 1/16W	[M]
R8235	ERJ3GEYJ822V	8.2K 1/16W	[M]
R8236	ERJ3GEYJ822V	8.2K 1/16W	[M]
R8241	ERJ3GEYJ223V	22K 1/16W	[M]
R8242	ERJ3GEYJ752V	7.5K 1/16W	[M]
R8251	ERJ6GEYJ6R8V	6.8 1/10W	[M]
R8271	ERJ14YKR39U	0.39 1/4W	[M]
R8281	ERJ3GEYJ101V	100 1/16W	[M]
R8282	ERJ3GEYJ101V	100 1/16W	[M]
R8311	D0HB242ZA002	2.4K 3W	[M]
R8312	ERJ3RBD102V	1K 3W	[M]
R8313	D0HB243ZA002	24K 3W	[M]
R8314	ERJ3GEY0R00V	0 1/16W	[M]
R8315	ERJ3GEYJ6R8V	6.8 1/16W	[M]
R8321	D0HB161ZA002	160 3W	[M]
R8322	ERJ3RED100V	10 3W	[M]
R8325	D0HB161ZA002	160 3W	[M]
R8326	ERJ3GEY0R00V	0 1/16W	[M]
R8331	D0HB161ZA002	160 3W	[M]
R8332	ERJ3RED100V	10 3W	[M]
R8335	ERJ3RED820V	82 3W	[M]
R8341	ERJ3RED820V	82 3W	[M]
R8401	ERJ2GEJ473X	47K 2W	[M]
R8402	ERJ2GEJ101X	100 2W	[M]
R8403	ERJ2GEJ101X	100 2W	[M]
R8404	ERJ2GEJ101X	100 2W	[M]
R8420	ERJ3GEYJ222V	2.2K 1/16W	[M]
R8451	ERJ3GEY0R00V	0 1/16W	[M]
R8501	ERJ3GEY0R00V	0 1/16W	[M]
R8550	ERJ3GEYJ752V	7.5K 1/16W	[M]
R8551	ERJ3GEY0R00V	0 1/16W	[M]
R8552	ERJ3GEYJ331V	330 1/16W	[M]
R8553	ERJ3GEYJ102V	1K 1/16W	[M]
R8554	ERJ3GEYJ220V	22 1/16W	[M]
R8555	ERJ3GEYJ2R2V	2.2 1/16W	[M]
R8556	ERJ3GEYJ560V	56 1/16W	[M]
R8557	ERJ3GEYJ510V	51 1/16W	[M]
R8558	ERJ3GEYJ473V	47K 1/16W	[M]
R8559	ERJ3GEYJ153V	15K 1/16W	[M]
R8560	ERJ3GEYJ102V	1K 1/16W	[M]
R8561	ERJ3GEY0R00V	0 1/16W	[M]
R8562	ERJ3GEYJ331V	330 1/16W	[M]
R8563	ERJ3GEYJ102V	1K 1/16W	[M]
R8564	ERJ3GEYJ100V	10 1/16W	[M]
R8565	ERJ3GEYJ2R2V	2.2 1/16W	[M]
R8566	ERJ3GEYJ560V	56 1/16W	[M]
R8567	ERJ3GEYJ510V	51 1/16W	[M]
R8568	ERJ3GEYJ473V	47K 1/16W	[M]
R8569	ERJ3GEYJ123V	12K 1/16W	[M]
R8570	ERJ3GEYJ104V	100K 1/16W	[M]
R8601	ERJ3GEYJ102V	1K 1/16W	[M]
R8605	ERJ3GEYJ104V	100K 1/16W	[M]
R8606	ERJ3GEYJ103V	10K 1/16W	[M]
R8611	ERJ2GEJ101X	100 2W	[M]
R8621	ERJ3GEYJ105V	1M 1/16W	[M]
R8622	ERJ3RBD471V	470 3W	[M]
R33001	ERDS2TJ271T	270 1/4W	[M]

R33004	ERJ6GEYG151V	150 1/10W	[M]
R33005	ERJ6GEYG222V	2.2K 1/10W	[M]
R33007	ERJ6GEYG222V	2.2K 1/10W	[M]
R33008	ERJ6GEYG222V	2.2K 1/10W	[M]
R33009	ERJ6GEYG223V	22K 1/10W	[M]
R33010	ERDS2TJ103T	10K 1/4W	[M]
R33012	ERDS2TJ272T	2.7K 1/4W	[M]
R33013	ERJ3GEYJ104V	100K 1/16W	[M]
R33014	ERDS2TJ220T	22 1/4W	[M]
R33015	ERDS2TJ220T	22 1/4W	[M]
R33016	ERDS2TJ220T	22 1/4W	[M]
R33017	ERJ6GEYJ331V	330 1/10W	[M]
R34002	ERJ3GEYJ102V	1K 1/16W	[M]
R34003	ERDS2TJ471T	470 1/4W	[M]
R34004	ERDS2TJ471T	470 1/4W	[M]
R34005	ERJ3GEYJ562V	5.6K 1/16W	[M]
R34426	ERJ3GEYJ472V	4.7K 1/16W	[M]
R34427	ERJ3GEYJ472V	4.7K 1/16W	[M]
R34428	ERJ3GEYJ222V	2.2K 1/16W	[M]
R34429	ERJ3GEYJ222V	2.2K 1/16W	[M]
R36001	ERJ3GEYJ221V	220 1/16W	[M]
R36002	ERJ3GEYJ221V	220 1/16W	[M]
R36003	ERJ3GEYJ103V	10K 1/16W	[M]
R36004	ERJ3GEYJ102V	1K 1/16W	[M]
R36005	ERJ3GEYJ221V	220 1/16W	[M]
R36006	ERJ3GEYJ221V	220 1/16W	[M]
R36007	ERJ3GEYJ102V	1K 1/16W	[M]
R36008	ERJ3GEYJ221V	220 1/16W	[M]
R36009	ERJ3GEYJ223V	22K 1/16W	[M]
R36010	ERJ3GEYJ223V	22K 1/16W	[M]
R36011	ERJ3GEYJ223V	22K 1/16W	[M]
R36012	ERJ3GEYJ471V	470 1/16W	[M]
R36013	ERJ3GEYJ103V	10K 1/16W	[M]
R36014	ERJ3GEYJ221V	220 1/16W	[M]
R36015	ERJ3GEYJ221V	220 1/16W	[M]
R36016	ERJ3GEYJ221V	220 1/16W	[M]
R36017	ERJ3GEYJ221V	220 1/16W	[M]
R36018	ERJ3GEYJ221V	220 1/16W	[M]
R36019	ERJ3GEYJ221V	220 1/16W	[M]
R36020	ERJ3GEYJ103V	10K 1/16W	[M]
R36021	ERJ3GEYJ221V	220 1/16W	[M]
R36022	ERJ3GEYJ221V	220 1/16W	[M]
R36023	ERJ3GEYJ103V	10K 1/16W	[M]
R36024	ERJ3GEYJ102V	1K 1/16W	[M]
R36025	ERJ3GEYJ221V	220 1/16W	[M]
R36026	ERJ3GEYJ221V	220 1/16W	[M]
R36027	ERJ3GEYJ221V	220 1/16W	[M]
R36028	ERJ3GEYJ221V	220 1/16W	[M]
R36029	ERJ3GEYJ221V	220 1/16W	[M]
R36030	ERJ3GEYJ102V	1K 1/16W	[M]
R36031	ERJ3GEYJ102V	1K 1/16W	[M]
R36032	ERJ3GEYJ102V	1K 1/16W	[M]
R36033	ERJ3GEY0R00V	0 1/16W	[M]
R36034	ERJ3GEYJ331V	330 1/16W	[M]
R36035	ERJ3GEYJ331V	330 1/16W	[M]
R36036	ERJ3GEYJ331V	330 1/16W	[M]
R36037	ERJ3GEYJ331V	330 1/16W	[M]
R36038	ERJ3GEYJ331V	330 1/16W	[M]
R36039	ERJ3GEYJ101V	100 1/16W	[M]

R36040	ERJ3GEYJ101V	100 1/16W	[M]
R36041	ERJ3GEYJ331V	330 1/16W	[M]
R36042	ERJ3GEYJ331V	330 1/16W	[M]
R36043	ERJ3GEYJ681V	680 1/16W	[M]
R36044	ERJ3GEYJ681V	680 1/16W	[M]
R36045	ERJ3GEYJ681V	680 1/16W	[M]
R36046	ERJ3GEYJ101V	100 1/16W	[M]
R36047	ERJ3GEYJ101V	100 1/16W	[M]
R36048	ERJ3GEYJ221V	220 1/16W	[M]
R36049	ERJ3GEYJ101V	100 1/16W	[M]
R36050	ERJ3GEYJ821V	820 1/16W	[M]
R36051	ERJ3GEY0R00V	0 1/16W	[M]
R36052	ERJ3GEY0R00V	0 1/16W	[M]
R36053	ERJ3GEYJ103V	10K 1/16W	[M]
R36054	ERJ3GEYJ103V	10K 1/16W	[M]
R36055	ERJ3GEYJ103V	10K 1/16W	[M]
R36056	ERJ3GEYJ103V	10K 1/16W	[M]
R36057	ERJ3GEYJ103V	10K 1/16W	[M]
R36058	ERJ3GEYJ221V	220 1/16W	[M]
R36059	ERJ3GEYJ221V	220 1/16W	[M]
R36060	ERJ3GEYJ221V	220 1/16W	[M]
R36061	ERJ3GEYJ221V	220 1/16W	[M]
R36062	ERJ3GEYJ223V	22K 1/16W	[M]
R36063	ERJ3GEYJ223V	22K 1/16W	[M]
R36064	ERJ3GEYJ223V	22K 1/16W	[M]
R36065	ERJ3GEYJ223V	22K 1/16W	[M]
R36066	ERJ3GEYJ223V	22K 1/16W	[M]
R36067	ERJ3GEYJ472V	4.7K 1/16W	[M]
R36074	ERJ3GEYJ221V	220 1/16W	[M]
R36075	ERJ3GEY0R00V	0 1/16W	[M]
R36076	ERJ3GEYJ102V	1K 1/16W	[M]
R36077	ERJ3GEYJ102V	1K 1/16W	[M]
R36078	ERDS2TJ272T	2.7K 1/4W	[M]
R36080	ERJ3GEYJ221V	220 1/16W	[M]
R36081	ERJ3GEYJ153V	15K 1/16W	[M]
R36082	ERJ3GEYJ103V	10K 1/16W	[M]
R36083	ERJ3GEYJ103V	10K 1/16W	[M]
R36084	ERJ3GEYJ103V	10K 1/16W	[M]
R36085	ERJ3GEYJ103V	10K 1/16W	[M]
R36086	ERJ6GEYJ560V	56 1/10W	[M]
R36087	ERJ3GEYJ331V	330 1/16W	[M]
R36088	ERJ3GEYJ331V	330 1/16W	[M]
R36089	ERJ6GEYG473V	47K 1/10W	[M]
R36090	ERJ3GEYJ331V	330 1/16W	[M]
R36091	ERJ3GEYJ103V	10K 1/16W	[M]
R36092	ERJ3GEYJ103V	10K 1/16W	[M]
R36093	ERJ3GEYJ103V	10K 1/16W	[M]
R36094	ERJ3GEYJ821V	820 1/16W	[M]
R36096	ERJ3GEYJ103V	10K 1/16W	[M]
R36097	ERJ3GEYJ103V	10K 1/16W	[M]
R36100	ERJ3GEYJ103V	10K 1/16W	[M]
R36101	ERJ3GEYJ221V	220 1/16W	[M]
R36102	ERJ3GEYJ103V	10K 1/16W	[M]
R36103	ERJ6GEYJ221V	220 1/10W	[M]
R36104	ERJ3GEYJ103V	10K 1/16W	[M]
K8100	ERJ3GEY0R00V	0 1/16W	[M]
K8321	ERJ2GE0R00X	0 1/4W	[M]
K8325	ERJ2GE0R00X	0 1/4W	[M]
K8331	ERJ2GE0R00X	0 1/4W	[M]

K8335	ERJ2GE0R00X	0 1/4W	[M]
K8341	ERJ2GE0R00X	0 1/4W	[M]
K8421	ERJ3GEY0R00V	0 1/16W	[M]
K8651	ERJ2GE0R00X	0 1/4W	[M]
K36002	ERJ3GEY0R00V	0 1/16W	[M]
RA8011	D1H88204A024	CHIP RESISTOR	[M]
RA8012	D1H88204A024	CHIP RESISTOR	[M]
RA8013	D1H88204A024	CHIP RESISTOR	[M]
RA8014	D1H88204A024	CHIP RESISTOR	[M]
RA8015	D1H422020001	CHIP RESISTOR	[M]
RA8016	D1H88204A024	CHIP RESISTOR	[M]
RA8017	D1H88204A024	CHIP RESISTOR	[M]
RA8018	D1H88204A024	CHIP RESISTOR	[M]
RA8021	D1H410320002	CHIP RESISTOR	[M]
RA8031	D1H447220001	CHIP RESISTOR	[M]
RA8032	D1H447220001	CHIP RESISTOR	[M]
RA8271	D1H410320002	CHIP RESISTOR	[M]
RA8401	D1H410120001	CHIP RESISTOR	[M]
RA8402	D1H410120001	CHIP RESISTOR	[M]
RA8501	D1H456020001	CHIP RESISTOR	[M]
RA8502	D1H85604A024	CHIP RESISTOR	[M]
RA8503	D1H456020001	CHIP RESISTOR	[M]
RA8504	D1H456020001	CHIP RESISTOR	[M]
RA8611	D1H447220001	CHIP RESISTOR	[M]
		CAPACITORS	
C11	F1D1E103A001	0.01 25V	[M]
C12	F2A1C101A235	100P 16V	[M]
C21	F1D1E103A001	0.01 25V	[M]
C22	F2A1C101A235	100P 16V	[M]
C103	ECEA1CKA100B	10 16V	[M]
C104	ECEA1CKA100B	10 16V	[M]
C105	ECEA1CKA100B	10 16V	[M]
C106	ECEA1CKA100B	10 16V	[M]
C113	ECJ1VC1H101J	100P 50V	[M]
C114	ECJ1VC1H101J	100P 50V	[M]
C115	ECJ1VC1H101J	100P 50V	[M]
C116	ECJ1VC1H101J	100P 50V	[M]
C120	ECEA1CKA220B	22 16V	[M]
C121	ECEA1CKA220B	22 16V	[M]
C122	ECEA1CKA220B	22 16V	[M]
C123	ECEA1CKA220B	22 16V	[M]
C124	ECEA1CKA220B	22 16V	[M]
C125	ECEA1CKA220B	22 16V	[M]
C126	ECJ1VC1H101J	100P 50V	[M]
C127	ECJ1VC1H101J	100P 50V	[M]
C128	ECJ1VC1H101J	100P 50V	[M]
C129	ECJ1VC1H101J	100P 50V	[M]
C130	ECJ1VC1H101J	100P 50V	[M]
C131	ECJ1VC1H101J	100P 50V	[M]
C201	ECJ1VC1H101J	100P 50V	[M]
C201	ECJ2YB1H104K	0.1 50V	[M]
C202	ECJ1VC1H101J	100P 50V	[M]
C203	ECA1HAK010XB	1 50V	[M]
C204	ECA1HAK010XB	1 50V	[M]
C204	F1J1E104A081	0.1 25V	[M]
C205	ECJ1VC1H101J	100P 50V	[M]
C205	F1J1E104A081	0.1 25V	[M]
C206	ECJ1VC1H101J	100P 50V	[M]

C206	ECJ2VB1H102K	1000P 50V	[M]
C207	ECA1HAK010XB	1 50V	[M]
C207	ECJ2VB1H153K	0.015 50V	[M]
C208	ECA1HAK010XB	1 50V	[M]
C209	ECA1HAK4R7XB	4.7 50V	[M]
C210	ECA1HAK4R7XB	4.7 50V	[M]
C211	ECA1AM221B	220 10V	[M]
C212	ECJ2VB1H223K	0.022 50V	[M]
C213	ECJ2VF1H104Z	0.1 50V	[M]
C214	ECJ1VC1H050C	5P 50V	[M]
C215	ECJ1VC1H120J	12P 50V	[M]
C216	ECA1CAK101XB	100 16V	[M]
C217	F1H1A105A025	1 10V	[M]
C218	F1H1C104A065	0.1 16V	[M]
C219	F1H1A105A025	1 10V	[M]
C220	ECJ1VB1H222K	2200P 50V	[M]
C221	F1H1A105A025	1 10V	[M]
C222	ECJ1VB1H222K	2200P 50V	[M]
C223	ECJ2VB1H223K	0.022 50V	[M]
C224	ECA1HAK4R7XB	4.7 50V	[M]
C225	ECA1HAK4R7XB	4.7 50V	[M]
C226	F1H1A105A025	1 10V	[M]
C227	ECA1CAK101XB	100 16V	[M]
C228	ECA1CAK470XB	47 16V	[M]
C229	ECA1CAK101XB	100 16V	[M]
C230	F1H1C104A065	0.1 16V	[M]
C231	F1H1A105A025	1 10V	[M]
C232	F1H1A105A025	1 10V	[M]
C233	F1H1C104A065	0.1 16V	[M]
C234	ECJ1VB1H222K	2200P 50V	[M]
C235	ECJ1VB1H222K	2200P 50V	[M]
C236	F1H1C104A065	0.1 16V	[M]
C237	ECJ1VC1H101J	100P 50V	[M]
C238	ECJ1VC1H101J	100P 50V	[M]
C239	ECA1CAK100XB	10 16V	[M]
C240	ECA1CAK100XB	10 16V	[M]
C241	ECJ1VB1H103K	0.01 50V	[M]
C242	ECJ1VC1H470J	47P 50V	[M]
C243	ECJ1VC1H101J	100P 50V	[M]
C244	ECJ1VC1H101J	100P 50V	[M]
C245	ECJ1VC1H470J	47P 50V	[M]
C246	ECJ1VB1H103K	0.01 50V	[M]
C247	ECA1HAK4R7XB	4.7 50V	[M]
C301	ECJ1VB1H471K	470P 50V	[M]
C302	ECJ1VB1H471K	470P 50V	[M]
C303	ECJ1VB1H471K	470P 50V	[M]
C304	ECJ1VB1H471K	470P 50V	[M]
C305	ECJ1VB1H471K	470P 50V	[M]
C306	ECJ1VB1H471K	470P 50V	[M]
C307	ECJ1VB1H102K	1000P 50V	[M]
C308	ECJ1VB1H103K	0.01 50V	[M]
C309	ECJ1VB1H103K	0.01 50V	[M]
C310	ECJ1VB1H103K	0.01 50V	[M]
C311	ECJ1VB1H103K	0.01 50V	[M]
C312	ECJ1VC1H101J	100P 50V	[M]
C313	ECJ1VC1H330J	33P 50V	[M]
C314	ECJ1VB1H821K	820P 50V	[M]
C315	F1H1A105A025	1 10V	[M]
C316	ECA1CAK100XB	10 16V	[M]

C317	ECJ1VC1H101J	100P 50V	[M]
C318	ECA1CAK100XB	10 16V	[M]
C319	ECJ1VC1H101J	100P 50V	[M]
C320	ECJ1VC1H101J	100P 50V	[M]
C321	F1H1A105A025	1 10V	[M]
C322	ECJ1VC1H330J	33P 50V	[M]
C323	ECA1CAK100XB	10 16V	[M]
C324	ECJ1VC1H330J	33P 50V	[M]
C325	F1H1A105A025	1 10V	[M]
C326	F1H1A105A025	1 10V	[M]
C327	F1H1A105A025	1 10V	[M]
C328	F1H1A105A025	1 10V	[M]
C329	F1H1A105A025	1 10V	[M]
C330	F1H1A105A025	1 10V	[M]
C331	F1H1A105A025	1 10V	[M]
C332	F1H1A105A025	1 10V	[M]
C333	F1H1C104A065	0.1 16V	[M]
C334	F1H1A105A025	1 10V	[M]
C335	F1H1A105A025	1 10V	[M]
C336	ECJ1VB1H102K	1000P 50V	[M]
C337	ECJ2VB1H153K	0.015 50V	[M]
C338	ECA1HAKR33XB	0.33 50V	[M]
C339	F1H1C104A065	0.1 16V	[M]
C340	ECJ1VB1H102K	1000P 50V	[M]
C341	ECJ2VB1H153K	0.015 50V	[M]
C342	ECA1CAK100XB	10 16V	[M]
C343	ECA1CAK100XB	10 16V	[M]
C344	ECA1HAKR33XB	0.33 50V	[M]
C345	F1H1A105A025	1 10V	[M]
C346	F1H1A105A025	1 10V	[M]
C347	F1H1A105A025	1 10V	[M]
C348	F1H1A105A025	1 10V	[M]
C349	ECJ1VC1H470J	47P 50V	[M]
C350	ECJ1VC1H470J	47P 50V	[M]
C351	F1H1A105A025	1 10V	[M]
C352	F1H1C104A065	0.1 16V	[M]
C353	ECJ1VB1H821K	820P 50V	[M]
C401	ECA1CAK100XB	10 16V	[M]
C402	F1H1A105A025	1 10V	[M]
C403	ECA1HAK010XB	1 50V	[M]
C404	ECA1HAK010XB	1 50V	[M]
C405	ECJ1VB1H103K	0.01 50V	[M]
C406	ECJ1VC1H470J	47P 50V	[M]
C407	ECJ1VC1H101J	100P 50V	[M]
C408	ECJ1VC1H101J	100P 50V	[M]
C409	ECJ1VC1H470J	47P 50V	[M]
C410	F1H1A105A025	1 10V	[M]
C411	ECJ1VB1H103K	0.01 50V	[M]
C412	ECA1CAK100XB	10 16V	[M]
C413	ECA1CAK100XB	10 16V	[M]
C414	ECJ2VB1H333K	0.033 50V	[M]
C415	ECEA1HKAR47B	0.47 50V	[M]
C416	ECEA1HKAR47B	0.47 50V	[M]
C417	ECA1CAK100XB	10 16V	[M]
C419	ECJ1VB1H102K	1000P 50V	[M]
C420	ECJ1VB1H102K	1000P 50V	[M]
C421	ECJ2VB1H333K	0.033 50V	[M]
C422	F1H1C104A065	0.1 16V	[M]
C423	F1H1C104A065	0.1 16V	[M]

C424	ECJ1VB1H222K	2200P 50V	[M]
C425	ECJ1VB1H222K	2200P 50V	[M]
C426	ECA1HAK4R7XB	4.7 50V	[M]
C427	ECJ1VB1C393K	0.039 16V	[M]
C428	ECJ1VB1H103K	0.01 50V	[M]
C429	ECJ1VB1H821K	820P 50V	[M]
C430	ECA1CAK100XB	10 16V	[M]
C431	ECJ1VB1H103K	0.01 50V	[M]
C432	ECA1HAK4R7XB	4.7 50V	[M]
C433	ECJ1VC1H101J	100P 50V	[M]
C434	ECJ1VC1H330J	33P 50V	[M]
C435	ECJ1VC1H101J	100P 50V	[M]
C436	F1H1C104A065	0.1 16V	[M]
C437	F1H1A105A025	1 10V	[M]
C438	F1H1A105A025	1 10V	[M]
C439	ECJ1VB1C393K	0.039 16V	[M]
C440	ECA1CAK470XB	47 16V	[M]
C441	ECA1CAK100XB	10 16V	[M]
C442	ECA1CAK470XB	47 16V	[M]
C443	ECJ1VB1H152K	1500P 50V	[M]
C444	ECA1HAK4R7XB	4.7 50V	[M]
C445	ECA1HAK4R7XB	4.7 50V	[M]
C446	ECA1HAK4R7XB	4.7 50V	[M]
C447	ECA1HAK4R7XB	4.7 50V	[M]
C448	ECA1HAK4R7XB	4.7 50V	[M]
C449	ECA1HAK4R7XB	4.7 50V	[M]
C450	ECJ1VC1H101J	100P 50V	[M]
C451	ECJ1VC1H330J	33P 50V	[M]
C452	F1H1C104A065	0.1 16V	[M]
C453	ECJ1VB1C333K	0.033 16V	[M]
C454	ECJ1VB1H222K	2200P 50V	[M]
C455	ECJ1VB1C393K	0.039 16V	[M]
C456	ECA1CAK100XB	10 16V	[M]
C458	ECA1CAK100XB	10 16V	[M]
C459	ECA1CAK100XB	10 16V	[M]
C460	ECA1CAK100XB	10 16V	[M]
C490	F1H1C104A065	0.1 16V	[M]
C491	F1H1C104A065	0.1 16V	[M]
C494	ECJ1VB1C823K	0.082 16V	[M]
C502	ECEA1HKAR47B	0.47 50V	[M]
C503	F1H1A105A025	1 10V	[M]
C504	F1H1A105A025	1 10V	[M]
C505	ECJ1VC1H101J	100P 50V	[M]
C506	ECJ1VC1H330J	33P 50V	[M]
C508	ECA1HAK0R1XB	0.1 50V	[M]
C601	ECJ1VB1H103K	0.01 50V	[M]
C602	ECJ1VB1H103K	0.01 50V	[M]
C603	ECJ1VB1H103K	0.01 50V	[M]
C604	ECJ1VB1H103K	0.01 50V	[M]
C605	ECEA1CKA100B	10 16V	[M]
C606	ECEA1CKA100B	10 16V	[M]
C607	ECEA1HKA4R7B	4.7 50V	[M]
C608	ECQE1104KF3	0.1 100V	[M]
C609	ECA1EM102B	1000 25V	[M]
C610	F2A1E2220046	2200P 25V	[M]
C611	ECA1EM102B	1000 25V	[M]
C612	ECA1CM101B	100 16V	[M]
C613	ECJ1VB1H103K	0.01 50V	[M]
C614	F1B1H103A007	0.01 50V	[M]

C615	ECA1CM101B	100 16V	[M]
C616	ECA1CM100B	10 16V	[M]
C701	F1H1A105A025	1 10V	[M]
C702	F1H1A105A025	1 10V	[M]
C703	ECJ1VC1H101J	100P 50V	[M]
C704	ECJ1VC1H101J	100P 50V	[M]
C705	ECJ1VC1H330J	33P 50V	[M]
C706	ECJ1VB1H471K	470P 50V	[M]
C707	ECJ1VB1H471K	470P 50V	[M]
C708	ECEA1CKA100B	10 16V	[M]
C709	ECEA1CKA100B	10 16V	[M]
C711	ECJ1VC1H101J	100P 50V	[M]
C712	ECJ1VC1H101J	100P 50V	[M]
C713	ECJ1VC1H330J	33P 50V	[M]
C714	ECJ1VB1H103K	0.01 50V	[M]
C715	ECJ1VB1H103K	0.01 50V	[M]
C716	ECA1HAK4R7XB	4.7 50V	[M]
C717	ECA1HAK4R7XB	4.7 50V	[M]
C1121	ECQU2A683MVA	0.068 100V	[M]
C1125	F1BAF1020020	1000P 10V	[M]
C1126	F1BAF331A013	330 10V	[M]
C1128	ECQU2A223MVA	0.022 100V	[M]
C1140	EEUEB2E101SE	100 250V	[M]
C1151	ECQB1H223JF3	0.022 50V	[M]
C1152	ECQB1H103JF3	0.01 50V	[M]
C1153	ECQV1H104JL3	0.1 50V	[M]
C1154	ECQB1H223JF3	0.022 50V	[M]
C1155	ECKN3A271KBP	270P 1000	[M]
C1200	ECQV1H104JL3	0.1 50V	[M]
C1210	ECKN3A272KBP	2700P 1000	[M]
C1230	ECA1HM220B	22 50V	[M]
C1240	F2A1A1020056	1000P 10V	[M]
C1241	ECA0JM221B	220 6.3V	[M]
C1250	F2A1E6810011	680P 25V	[M]
C1251	ECA1EM101B	100 25V	[M]
C1260	F2A1A1020056	1000P 10V	[M]
C1261	F2A1A1020056	1000P 10V	[M]
C1262	ECA1AM221B	220 10V	[M]
C1270	F2A1H470A147	47P 50V	[M]
C1280	F2A1H1010044	100P 50V	[M]
C1290	F2A1C6810023	680P 16V	[M]
C1291	ECA1CM101B	100 16V	[M]
C1310	ECJ2VF1H104Z	0.1 50V	[M]
C1351	ECJ1VF1H103Z	0.01 50V	[M]
C1352	ECEA0JKA470B	47 6.3V	[M]
C2001	ECJ1VC1H330J	33P 50V	[M]
C2003	ECJ1VF1A105Z	1 10V	[M]
C2051	ECEA0JKN220B	22 6.3V	[M]
C2053	ECEA1CKA100B	10 16V	[M]
C2054	ECJ1VB1H392K	3900P 50V	[M]
C2055	ECJ1VF1C104Z	0.1 16V	[M]
C2099	ECJ1VC1H681J	680P 50V	[M]
C2501	ECJ1VF1C104Z	0.1 16V	[M]
C2502	ECEA0JKA221B	220 6.3V	[M]
C2504	ECJ1VB1E223K	0.022 25V	[M]
C2505	ECJ1VB1E223K	0.022 25V	[M]
C2506	F1H1A224A025	0.22 10V	[M]
C2507	ECJ1VB1H102K	1000P 50V	[M]
C2508	ECJ1VB1H182K	1800P 50V	[M]

C2509	ECEA1CKA220B	22 16V	[M]
C2510	F1H1C104A065	0.1 16V	[M]
C2511	F1H1C104A065	0.1 16V	[M]
C2512	F1H1C104A065	0.1 16V	[M]
C2513	ECJ1VF1A105Z	1 10V	[M]
C2515	F1H1H103A730	0.01 50V	[M]
C2518	F1H1H103A730	0.01 50V	[M]
C2519	F1H1H103A730	0.01 50V	[M]
C2520	F1H1C104A065	0.1 16V	[M]
C2551	ECJ1VB1C563K	0.056 16V	[M]
C2552	ECJ1VB1C563K	0.056 16V	[M]
C2561	ECJ1VB1C563K	0.056 16V	[M]
C2562	ECJ1VB1C563K	0.056 16V	[M]
C2571	ECA1EM221B	220 25V	[M]
C2572	ECA1EM221B	220 25V	[M]
C2601	F1H1H103A730	0.01 50V	[M]
C2602	F1H1H103A730	0.01 50V	[M]
C3002	F1H1C104A065	0.1 16V	[M]
C3003	F1H1C104A065	0.1 16V	[M]
C3004	ECJ1VC1H151J	150P 50V	[M]
C3005	F1H1C104A065	0.1 16V	[M]
C3006	ECJ1VB1C105K	10 16V	[M]
C3007	ECJ1VC1H330J	33P 50V	[M]
C3008	ECEA1HKA4R7B	4.7 50V	[M]
C3010	ECJ1VB1C105K	1 16V	[M]
C3011	ECEA0JKA470B	47 6.3V	[M]
C3012	F1H1C104A065	0.1 16V	[M]
C3013	F1H1C104A065	0.1 16V	[M]
C3015	F1H1C104A065	0.1 16V	[M]
C3016	F1H1A105A025	1 10V	[M]
C3017	F1H1C104A065	0.1 16V	[M]
C3019	F1H1C104A065	0.1 16V	[M]
C3020	ECEA1EKA3R3B	3.3 25V	[M]
C3021	ECEA1CKA100B	10 16V	[M]
C3022	F1H1H103A748	0.01 50V	[M]
C3025	ECJ1VC1H331J	330P 50V	[M]
C3027	ECJ2VB1H103K	0.01 50V	[M]
C3028	ECEA0JKA470B	47 6.3V	[M]
C3029	F1H1H103A730	0.01 50V	[M]
C3030	F1H1H103A730	0.01 50V	[M]
C3031	F1H1C104A065	0.1 16V	[M]
C3032	ECEA0JKA470B	47 6.3V	[M]
C3033	ECJ1VB1C105K	1 16V	[M]
C3034	ECJ1VC1H020C	2P 50V	[M]
C3035	F1H1C104A065	0.1 16V	[M]
C3036	ECEA1EKA3R3B	3.3 25V	[M]
C3037	ECEA1HKA2R2B	2.2 50V	[M]
C3038	ECJ1VB1H472K	4700P 50V	[M]
C3039	ECJ1VB1C333K	0.033 16V	[M]
C3040	F1H1A474A025	0.47 10V	[M]
C3041	ECJ1VB1E223K	0.022 25V	[M]
C3042	ECEA1EKA4R7B	4.7 25V	[M]
C3047	ECJ1VF1C104Z	0.1 16V	[M]
C3052	F1H1C104A065	0.1 16V	[M]
C3053	F1H1C104A065	0.1 16V	[M]
C3062	ECEA1CKA100B	10 16V	[M]
C3065	F1H1C104A065	0.1 16V	[M]
C3066	F1H1C104A065	0.1 16V	[M]
C3099	ECEA0JKA101B	100 6.3V	[M]

C3701	F1H1C104A065	0.1 16V	[M]
C3702	F1H1H103A730	0.01 50V	[M]
C3703	F1H1H103A730	0.01 50V	[M]
C3704	F2A0J471A247	470P 6.3V	[M]
C3705	F1H1C104A065	0.1 16V	[M]
C4010	ECEA1CKA100B	10 16V	[M]
C4018	ECEA0JKA220B	22 6.3V	[M]
C4041	ECEA1EKA4R7B	4.7 25V	[M]
C4042	ECEA1EKA4R7B	4.7 25V	[M]
C4061	ECJ1VB1H103K	0.01 50V	[M]
C4062	ECEA0JKA330B	33 6.3V	[M]
C4063	ECEA1HKA3R3B	3.3 50V	[M]
C4064	ECJ1VB1H182K	1800P 50V	[M]
C4065	ECJ1VB1H182K	1800P 50V	[M]
C4081	ECQB1H223JM3	0.022 50V	[M]
C4082	ECJ1VB1H471K	470P 50V	[M]
C4083	ECEA0JKA470B	47 6.3V	[M]
C4084	ECJ1VB1H182K	1800P 50V	[M]
C4085	ECJ1VB1C683K	0.068 16V	[M]
C4303	F2A1HR22A009	22 50V	[M]
C4304	F2A1HR22A009	22 50V	[M]
C4501	F1H1C104A041	0.1 16V	[M]
C4502	ECEA1CKA100B	10 16V	[M]
C4503	ECEA1CKA100B	10 16V	[M]
C4504	ECEA1CKA100B	10 16V	[M]
C4505	ECEA0JKA330B	33 6.3V	[M]
C4506	ECEA1CKA100B	10 16V	[M]
C4507	ECEA0JKA220B	22 6.3V	[M]
C4508	ECJ1VB1C333K	0.033 16V	[M]
C4509	ECJ1VF1H103Z	0.01 50V	[M]
C4510	ECJ1VF1H103Z	0.01 50V	[M]
C4511	F1H1C104A041	0.1 16V	[M]
C4512	ECJ1VB1A224K	0.22 10V	[M]
C4513	ECEA0JKA220B	22 6.3V	[M]
C4514	ECEA1CKA100B	10 16V	[M]
C4515	ECEA0JKA330B	33 6.3V	[M]
C4516	ECEA1CKA100B	10 16V	[M]
C4517	ECEA0JKA220B	22 6.3V	[M]
C4519	ECA1CAK100XB	10 16V	[M]
C4520	ECA1CAK100XB	10 16V	[M]
C4521	ECEA1CKA100B	10 16V	[M]
C4522	ECEA0JKA220B	22 6.3V	[M]
C4523	ECJ1VF1H103Z	0.01 50V	[M]
C4524	F1H1C104A041	0.1 16V	[M]
C4525	ECEA1CKA220B	22 16V	[M]
C4530	ECJ1VC1H151J	150P 50V	[M]
C4531	ECJ1VC1H151J	150P 50V	[M]
C4534	ECQB1H153JF3	0.015 50V	[M]
C4535	ECQB1H153JF3	0.015 50V	[M]
C4536	ECJ1VF1H103Z	0.01 50V	[M]
C4537	ECJ2VC1H560G	56P 50V	[M]
C4538	ECJ1VF1H103Z	0.01 50V	[M]
C4563	F1H1C104A041	0.1 16V	[M]
C4565	F1H1C104A041	0.1 16V	[M]
C4567	ECEA1EKA3R3B	3.3 25V	[M]
C4568	ECJ1VB1H103K	0.01 50V	[M]
C4570	F1H1C104A041	0.1 16V	[M]
C4572	ECEA1HKA2R2B	2.2 50V	[M]
C4574	ECEA1HKA3R3B	3.3 50V	[M]

C4575	F1H1C104A041	0.1 16V	[M]
C4576	ECJ1VB1C223K	0.022 16V	[M]
C4577	ECEA1CKA100B	10 16V	[M]
C4578	F1H1A105A025	1 10V	[M]
C4601	ECEA1CKA100B	10 16V	[M]
C5001	F1H1H103A748	0.01 50V	[M]
C5002	F1H1H103A748	0.01 50V	[M]
C5003	F1H1H103A748	0.01 50V	[M]
C5004	F1H1H103A748	0.01 50V	[M]
C5005	ECEA0JKA101B	100 6.3V	[M]
C5006	F1H1C104A065	0.1 16V	[M]
C6001	ECJ1VC1H180J	18P 50V	[M]
C6002	ECJ1VC1H220J	22P 50V	[M]
C6003	ECJ1VC1H180J	18P 50V	[M]
C6004	ECJ1VC1H180J	18P 50V	[M]
C6005	ECEA1HKA3R3B	3.3 50V	[M]
C6006	ECJ1VC1H101J	100P 50V	[M]
C6007	ECJ1VC1H820J	82P 50V	[M]
C6008	ECJ1VC1H471J	470P 50V	[M]
C6009	F1H1H103A730	0.01 50V	[M]
C6010	F1H1H103A730	0.01 50V	[M]
C6011	F1H1H103A730	0.01 50V	[M]
C6013	ECJ1VF1A105Z	1 10V	[M]
C6014	ECJ1VB1H102K	1000P 50V	[M]
C6015	ECJ1VB1C333K	0.033 16V	[M]
C6016	ECJ1VB1H102K	1000P 50V	[M]
C6017	ECJ1VC1H471J	470P 50V	[M]
C6101	ECJ2VF1H104Z	0.1 50V	[M]
C6102	F1H1H103A730	0.01 50V	[M]
C6103	F1H1H103A730	0.01 50V	[M]
C6111	ECJ1VF1C104Z	0.1 16V	[M]
C6112	ECJ1VC1H330J	33P 50V	[M]
C6113	ECJ1VC1H330J	33P 50V	[M]
C6301	F1H1H103A730	0.01 50V	[M]
C6302	F1H1H103A730	0.01 50V	[M]
C6303	ECEA0JKA470B	47 6.3V	[M]
C6307	F1H1H103A730	0.01 50V	[M]
C6308	ECEA0JKA470B	47 6.3V	[M]
C7006	ECJ1VC1H330J	33P 50V	[M]
C7010	ECJ1VC1H101J	100P 50V	[M]
C7011	ECJ1VC1H101J	100P 50V	[M]
C7012	ECJ1VC1H101J	100P 50V	[M]
C7013	ECJ1VC1H101J	100P 50V	[M]
C7014	ECJ1VC1H101J	100P 50V	[M]
C7015	ECJ2VF1E104Z	0.1 25V	[M]
C7201	ECEA1VKA100B	10 35V	[M]
C7204	ECJ2VF1H104Z	0.1 50V	[M]
C7205	ECJ1VC1H221J	220P 50V	[M]
C7206	ECJ1VC1H221J	220P 50V	[M]
C7207	ECJ1VC1H221J	220P 50V	[M]
C7208	ECJ2VF1E104Z	0.1 25V	[M]
C7209	ECJ2VF1E104Z	0.1 25V	[M]
C7210	ECEA1AKA101B	100 10V	[M]
C7211	ECJ1VC1H270J	27P 50V	[M]
C7212	ECJ2VF1E104Z	0.1 25V	[M]
C7501	F1H1H103A730	0.01 50V	[M]
C7502	ECJ1VB1H392K	3900P 50V	[M]
C7503	ECJ1VB1H392K	3900P 50V	[M]
C7504	ECEA1CKA470B	47 16V	[M]

C7505	ECEA0JKA101B	100 6.3V	[M]
C7506	ECJ1VF1C104Z	0.1 16V	[M]
C7602	ECEA1HKA010B	1 50V	[M]
C7603	ECEA0JKA470B	47 6.3V	[M]
C7604	F1H1H103A730	0.01 50V	[M]
C7605	ECJ1VC1H330J	33P 50V	[M]
C7709	ECJ1VB1H182K	1800P 50V	[M]
C7752	ECEA0JKA331Q	330 6.3V	[M]
C8001	EEEFC0J101P	100P 6.3V	[M]
C8002	EEE0GA331WP	330P 4V	[M]
C8003	ECJ1VB1H222K	2200P 50V	[M]
C8004	ECJ0EF1C104Z	0.1 16V	[M]
C8005	ECJ1ZF1C104Z	0.1 16V	[M]
C8006	ECJ1ZF1C104Z	0.1 16V	[M]
C8007	ECJ0EF1C104Z	0.1 16V	[M]
C8008	ECJ1ZF1C104Z	0.1 16V	[M]
C8009	ECJ1ZF1C104Z	0.1 16V	[M]
C8010	ECJ0EF1C104Z	0.1 16V	[M]
C8011	F1H0J1050013	1 6.3V	[M]
C8012	ECJ1ZF1C104Z	0.1 16V	[M]
C8013	ECJ1ZF1C104Z	0.1 16V	[M]
C8014	ECJ1ZF1C104Z	0.1 16V	[M]
C8015	F1H0J1050013	1 6.3V	[M]
C8016	F1H0J1050013	1 6.3V	[M]
C8017	ECJ0EF1C104Z	0.1 16V	[M]
C8018	ECJ0EF1C104Z	0.1 16V	[M]
C8019	F1H0J1050013	1 6.3V	[M]
C8020	ECJ0EF1C104Z	0.1 16V	[M]
C8021	ECJ0EF1C104Z	0.1 16V	[M]
C8022	ECJ1ZF1C104Z	0.1 16V	[M]
C8023	F1H0J1050013	1 6.3V	[M]
C8024	ECJ1VB1H222K	2200P 50V	[M]
C8025	ECJ1ZF1C104Z	0.1 16V	[M]
C8026	F1H0J1050013	1 6.3V	[M]
C8027	ECJ0EF1C104Z	0.1 16V	[M]
C8028	F1H0J1050013	1 6.3V	[M]
C8031	ECJ1ZF1C104Z	0.1 16V	[M]
C8051	F1H0J1050013	1 6.3V	[M]
C8052	ECJ0EF1C104Z	0.1 16V	[M]
C8053	ECJ1VC1H221J	220P 50V	[M]
C8054	F1H0J1050013	1 6.3V	[M]
C8055	F1H0J1050013	1 6.3V	[M]
C8056	ECJ0EF1C104Z	0.1 16V	[M]
C8057	ECJ1VB1H222K	2200P 50V	[M]
C8111	F1H1C104A042	0.1 16V	[M]
C8112	ECJ2FB1A105K	10 10V	[M]
C8113	ECJ1VC1H471J	470P 50V	[M]
C8201	EEE0JA101WR	100P 6.3V	[M]
C8202	EEEFC0J101P	0J0P 6.3V	[M]
C8203	ECJ1ZF1C104Z	0.1 16V	[M]
C8204	ECJ1ZF1C104Z	0.1 16V	[M]
C8205	ECJ1ZF1C104Z	0.1 16V	[M]
C8206	F1H0J1050013	1 6.3V	[M]
C8207	ECJ1ZF1C104Z	0.1 16V	[M]
C8208	ECJ1ZF1C104Z	0.1 16V	[M]
C8211	ECJ1VB1C333K	0.033 16V	[M]
C8212	ECJ1ZF1C104Z	0.1 16V	[M]
C8213	ECJ1ZF1C104Z	0.1 16V	[M]
C8214	ECJ1ZF1C104Z	0.1 16V	[M]

C8215	ECJ1VB1H562K	5600P 50V	[M]
C8216	ECJ1VB1C183K	0.018 16V	[M]
C8217	F1H0J1050013	1 6.3V	[M]
C8218	F1H0J1050013	1 6.3V	[M]
C8221	F1H1C104A042	0.1 16V	[M]
C8222	F1H1C104A042	0.1 16V	[M]
C8223	F1H1C104A042	0.1 16V	[M]
C8224	F1H1C104A042	0.1 16V	[M]
C8225	ECJ1ZF1C104Z	0.1 16V	[M]
C8226	ECJ1ZF1C104Z	0.1 16V	[M]
C8227	ECJ1ZF1C104Z	0.1 16V	[M]
C8228	ECJ2FB1A105K	1 10V	[M]
C8229	ECJ2FB1A105K	1 10V	[M]
C8232	ECJ1ZF1C104Z	0.1 16V	[M]
C8233	ECJ1VB1H472K	4700P 50V	[M]
C8234	ECJ1ZF1C104Z	0.1 16V	[M]
C8235	ECJ1VC1H102J	1000P 50V	[M]
C8236	ECJ1VC1H102J	1000P 50V	[M]
C8237	ECJ1VC1H102J	1000P 50V	[M]
C8238	ECJ1VC1H821J	820P 50V	[M]
C8241	F1H1C104A042	0.1 16V	[M]
C8242	F1H1C104A042	0.1 16V	[M]
C8251	EEEFC0J221P	220P 6.3V	[M]
C8252	EEE1CA220WR	22P 16V	[M]
C8253	ECJ1ZF1C104Z	0.1 16V	[M]
C8254	ECJ1ZF1C104Z	0.1 16V	[M]
C8255	ECJ1ZF1C104Z	0.1 16V	[M]
C8261	ECJ1ZF1C104Z	0.1 16V	[M]
C8271	EEEFC1C470P	47 16V	[M]
C8272	EEE0JA330WR	33P 6.3V	[M]
C8273	ECJ1ZF1C104Z	0.1 16V	[M]
C8274	ECJ1ZF1C104Z	0.1 16V	[M]
C8275	ECJ1ZF1C104Z	0.1 16V	[M]
C8284	ECJ1VB1H103K	0.01 50V	[M]
C8285	ECJ1VB1H103K	0.01 50V	[M]
C8286	ECJ1VB1H103K	0.01 50V	[M]
C8287	F1H1C104A042	0.1 16V	[M]
C8288	ECJ1ZF1C104Z	0.1 16V	[M]
C8301	EEE0JA221WP	220P 6.3V	[M]
C8302	EEE0JA330WR	33P 6.3V	[M]
C8303	ECJ1ZF1C104Z	0.1 16V	[M]
C8304	F1H0J1050013	1 6.3V	[M]
C8307	ECJ1ZF1C104Z	0.1 16V	[M]
C8311	ECJ1ZF1C104Z	0.1 16V	[M]
C8312	F1H0J1050013	1 6.3V	[M]
C8400	ECJ1VC1H150J	15P 50V	[M]
C8420	F2G0J331A015	330P 6.3V	[M]
C8423	ECJ1ZF1C104Z	0.1 16V	[M]
C8424	ECJ1ZF1C104Z	0.1 16V	[M]
C8451	F3F1A106A001	10 10V	[M]
C8452	F3F1A106A001	10 10V	[M]
C8453	F3F1A106A001	10 10V	[M]
C8455	ECJ0EF1C104Z	0.1 16V	[M]
C8456	ECJ1ZF1C104Z	0.1 16V	[M]
C8461	F2G0J101A015	100P 6.3V	[M]
C8462	ECJ1ZF1C104Z	0.1 16V	[M]
C8501	F1K1A1060017	10 10V	[M]
C8502	ECJ1ZF1C104Z	0.1 16V	[M]
C8503	ECJ1ZF1C104Z	0.1 16V	[M]

C8504	ECJ1ZF1C104Z	0.1 16V	[M]
C8505	ECJ1VC1H221J	220P 50V	[M]
C8506	ECJ1VC1H101J	100P 50V	[M]
C8550	EEE0JA330WR	33P 6.3V	[M]
C8551	ECJ1ZF1C104Z	0.1 16V	[M]
C8552	EEEFC1C100R	10P 16V	[M]
C8553	EEE0JA470WR	47P 6.3V	[M]
C8554	F1H0J1050013	1 6.3V	[M]
C8561	ECJ1ZF1C104Z	0.1 16V	[M]
C8562	EEEFC1C100R	10P 16V	[M]
C8563	EEE0JA470WR	47P 6.3V	[M]
C8564	F1H0J1050013	1 6.3V	[M]
C8601	ECJ0EF1C104Z	0.1 16V	[M]
C8605	ECJ0EF1C104Z	0.1 16V	[M]
C8606	ECJ1VB1A224K	0.22 10V	[M]
C8611	ECJ1ZF1C104Z	0.1 16V	[M]
C8621	ECJ1VC1H390J	39P 50V	[M]
C8622	ECJ1VC1H050D	5P 50V	[M]
C8651	ECJ1ZF1C104Z	0.1 16V	[M]
C8652	ECJ1ZF1C104Z	0.1 16V	[M]
C8691	ECJ0EF1C104Z	0.1 16V	[M]
C8695	ECJ0EF1C104Z	0.1 16V	[M]
C33001	ECJ1VF1H103Z	0.01 50V	[M]
C33002	ECA1CHJ221B	220 16V	[M]
C33003	ECA1CHJ221B	220 16V	[M]
C33004	ECJ1VF1H103Z	0.01 50V	[M]
C33005	ECEA1HKA4R7B	4.7 50V	[M]
C33006	F1H1C104A065	0.1 16V	[M]
C33007	ECEA1AKA470B	47 10V	[M]
C33008	ECEA1AKA470B	47 10V	[M]
C33009	F1H1C104A065	0.1 16V	[M]
C33010	ECJ1VF1H103Z	0.01 50V	[M]
C33011	ECEA1CKA470B	47 16V	[M]
C33014	F2A1A221A206	220P 10V	[M]
C33015	F2A1A221A206	220P 10V	[M]
C33017	ECJ1VF1H103Z	0.01 50V	[M]
C33018	ECJ1VF1H104Z	0.1 50V	[M]
C33019	ECJ1VF1H104Z	0.1 50V	[M]
C33501	F2A1A221A206	220P 10V	[M]
C33502	ECJ1VF1H103Z	0.01 50V	[M]
C33503	ECJ1VF1H103Z	0.01 50V	[M]
C33504	ECJ1VB1H103K	0.01 50V	[M]
C33505	F1H1C104A065	0.1 16V	[M]
C33506	F1H1C104A065	0.1 16V	[M]
C33507	F1H0J1050013	1 6.3V	[M]
C33508	F1H0J1050013	1 6.3V	[M]
C33509	F2A0J102A247	1000P 6.3V	[M]
C33510	ECEA0JKA101B	100 6.3V	[M]
C33511	F2A0J102A247	1000P 6.3V	[M]
C33512	ECEA0JKA101B	100 6.3V	[M]
C33513	F2A0J102A247	1000P 6.3V	[M]
C33514	ECEA0JKA101B	100 6.3V	[M]
C33515	ECA0JM331B	330 6.3V	[M]
C33517	ECA0JM331B	330 6.3V	[M]
C33522	ECEA0JKA220B	22 6.3V	[M]
C33531	ECJ1VB1H103K	0.01 50V	[M]
C34010	F2A1A221A206	220P 10V	[M]
C34012	ECJ1VF1H103Z	0.01 50V	[M]
C34013	ECEA1HKA4R7B	4.7 50V	[M]

C34015	ECEA1HKA4R7B	4.7 50V	[M]
C34405	ECJ1VB1H102K	1000P 50V	[M]
C34414	ECEA1CKA470B	47 16V	[M]
C34415	ECEA1CKA470B	47 16V	[M]
C34427	ECJ1VB1H102K	1000P 50V	[M]
C36001	ECA0JM101B	100 6.3V	[M]
C36002	F1H1C104A065	0.1 16V	[M]
C36003	F1H1C104A065	0.1 16V	[M]
C36004	ECJ1VC1H331J	330P 50V	[M]
C36005	ECJ1VC1H331J	330P 50V	[M]
C36006	ECJ1VB1E223K	0.022 25V	[M]
C36007	ECJ1VC1H331J	330P 50V	[M]
C36008	F1H1C104A065	0.1 16V	[M]
C36009	ECEA1AKA220B	22 10V	[M]
C36011	ECA1HM2R2B	2.2 50V	[M]
C36013	F4D55334A008	0.055 2000V	[M]
C36014	ECJ2VF1E104Z	0.1 25V	[M]
C36015	ECJ1VF1H103Z	0.01 50V	[M]
C36016	ECJ2VF1E104Z	0.1 25V	[M]

25.5 Packing Materials & Accessories Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGV0116	PACKING CASE (INNER)	[M]
P2	RPNV0015	POLYFOAM	[M]
P3	VPF1131	POLYBAG	[M]
P4	RPGV0115	PACKING CASE (OUTER)	[M]
		ACCESSORIES	
A1	EUR7722X20	REMOTE CONTROL	[M]
A1-1	UR76EC3103A	R/C BATTERY COVER	[M]
A2	K2CB2CB00006	AC CORD	[M] ⚠
A3	RQT7708-P	OI BOOK (En)	[M]
A4	K1HA25HA0001	SYSTEM CABLE	[M]
A5	RSA0007-L	FM ANTENNA WIRE	[M]
A6	K2RC021B0001	ANTENNA PLUG	[M]
A7	N1DAAAA00002	AM LOOP ANTENNA	[M]
A8	RJL1P016B15A	VIDEO CABLE	[M]
A9	VJA1125	COAXIAL CABLE	[M]
A10	RQCA1029	SPK LABEL SHEET	[M]

25.6 Packaging

26 Additional Contents

26.1 Schematic Diagram

Note: With reference to pg 107 to pg 112 of original Service manual (SA-HT822VP).

26.2 Voltage Measurement

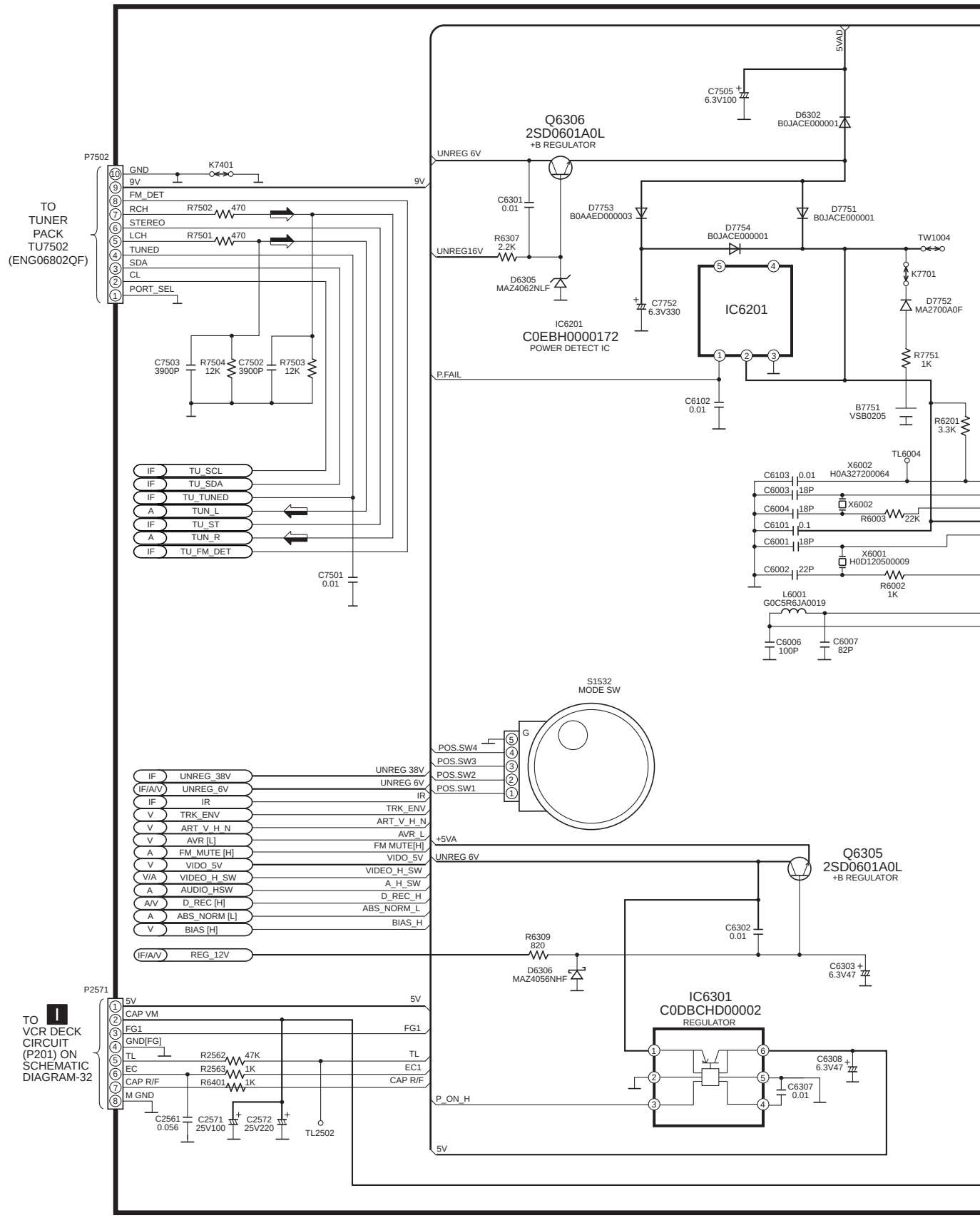
FLE0403D/E/J/N/S/A

SCHEMATIC DIAGRAM-15

B MAIN (SYSTEM CONTROL:S) CIRCUIT

: +B SIGNAL LINE

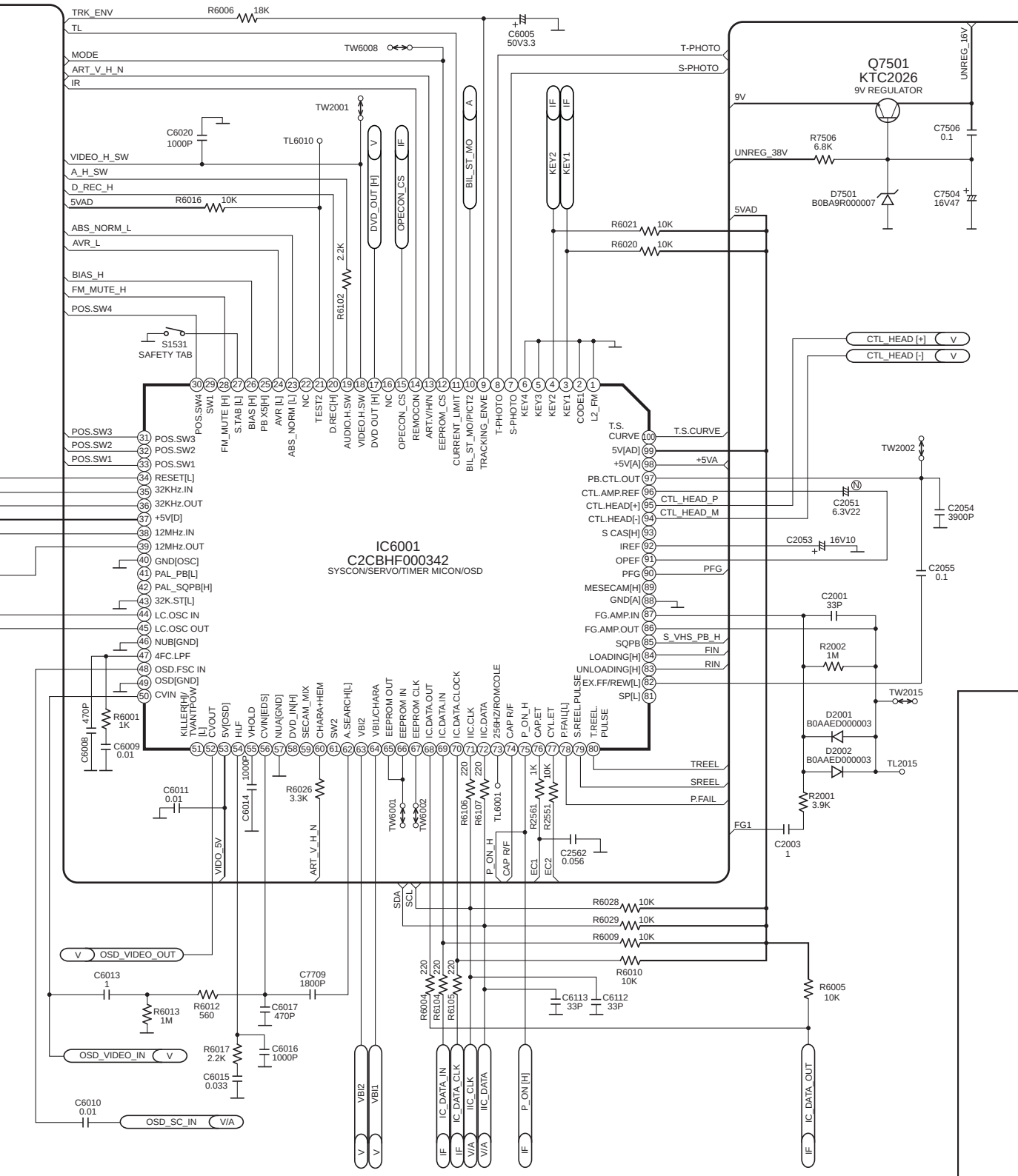
: FM/AM SIGNAL LINE



SCHEMATIC DIAGRAM-16

B MAIN (SYSTEM CONTROL:S) CIRCUIT

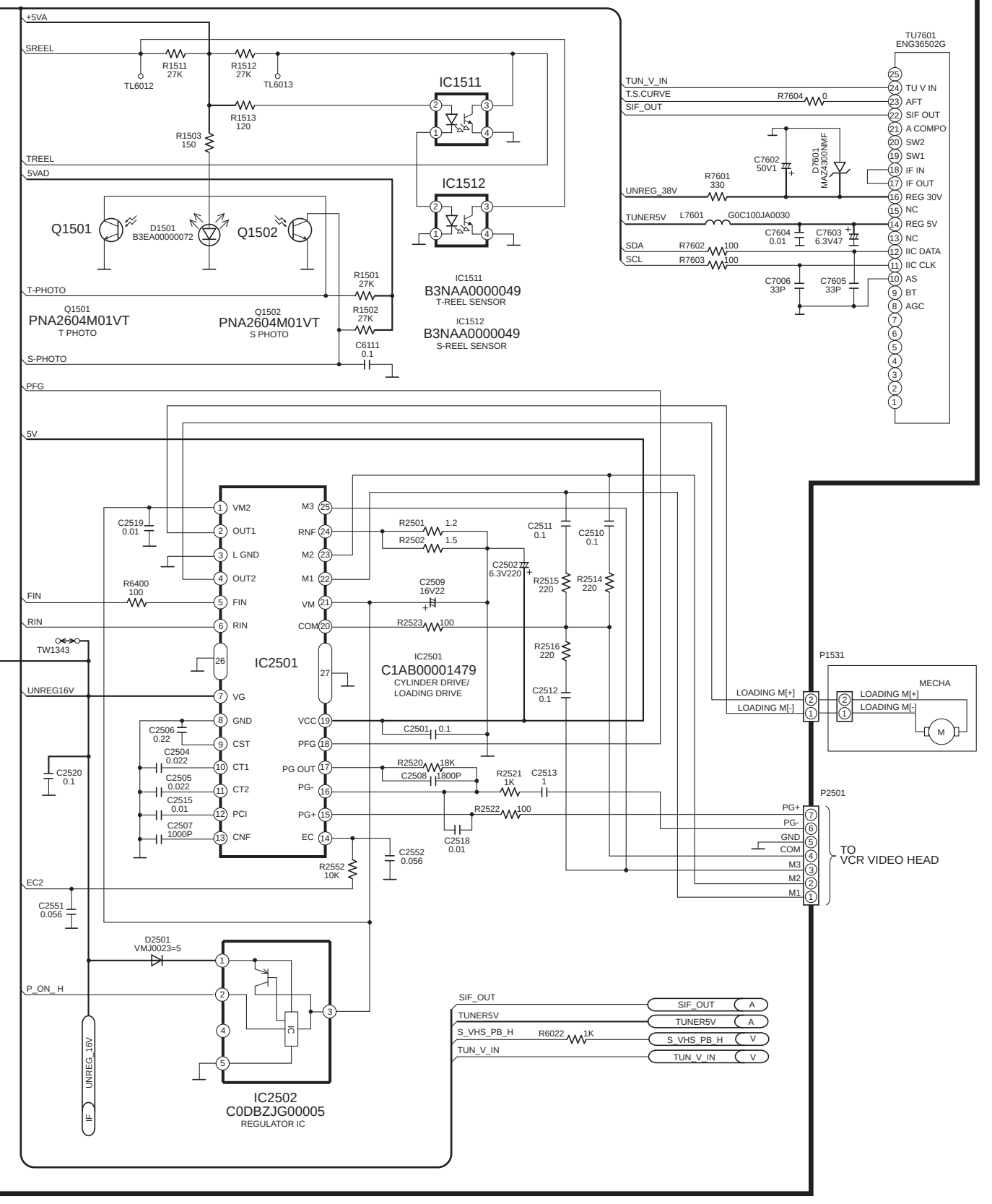
: +B SIGNAL LINE



SCHEMATIC DIAGRAM-17

B MAIN (SYSTEM CONTROL:S) CIRCUIT

——— : +B SIGNAL LINE

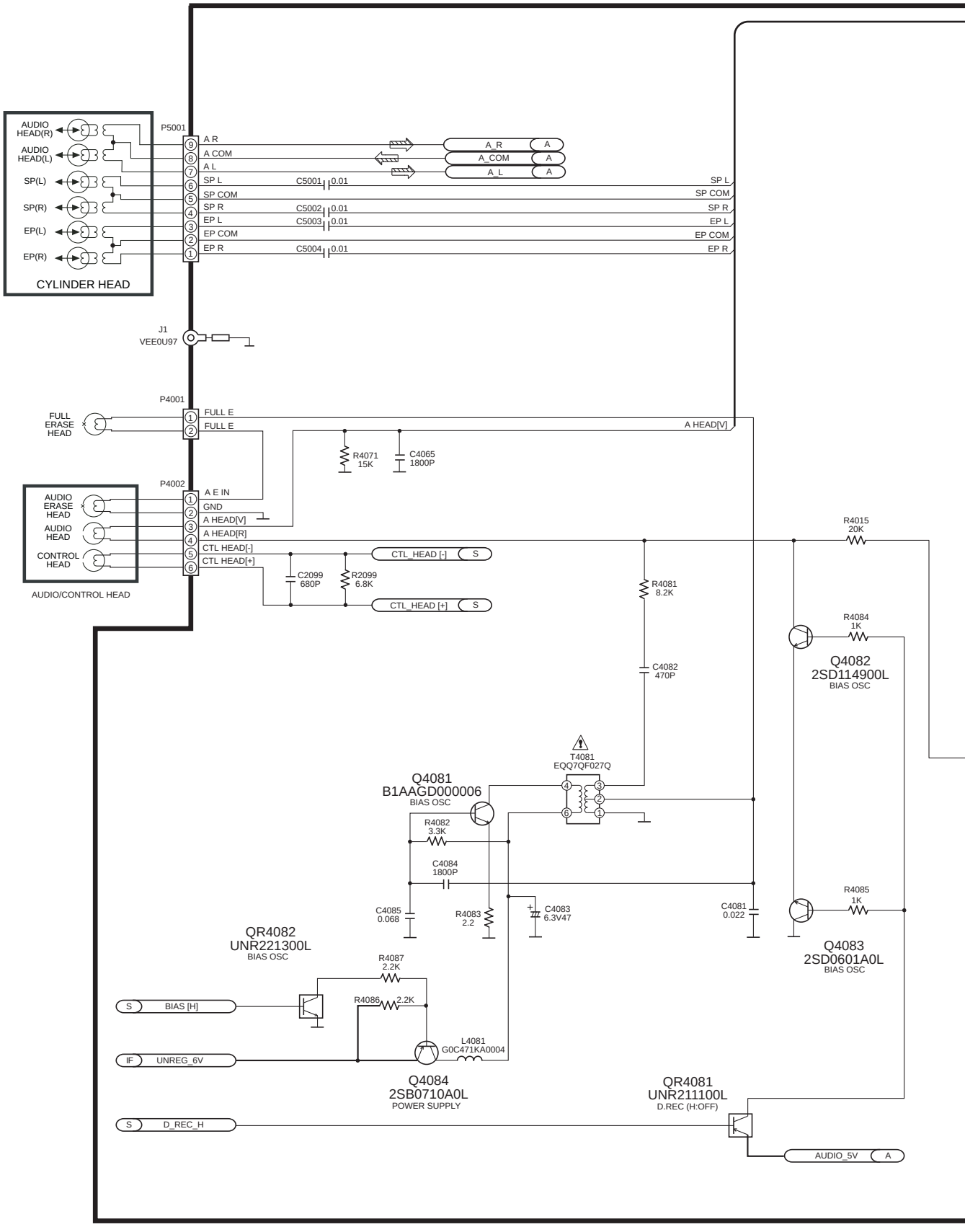


SCHEMATIC DIAGRAM-18

B MAIN (VIDEO:V) CIRCUIT

: +B SIGNAL LINE

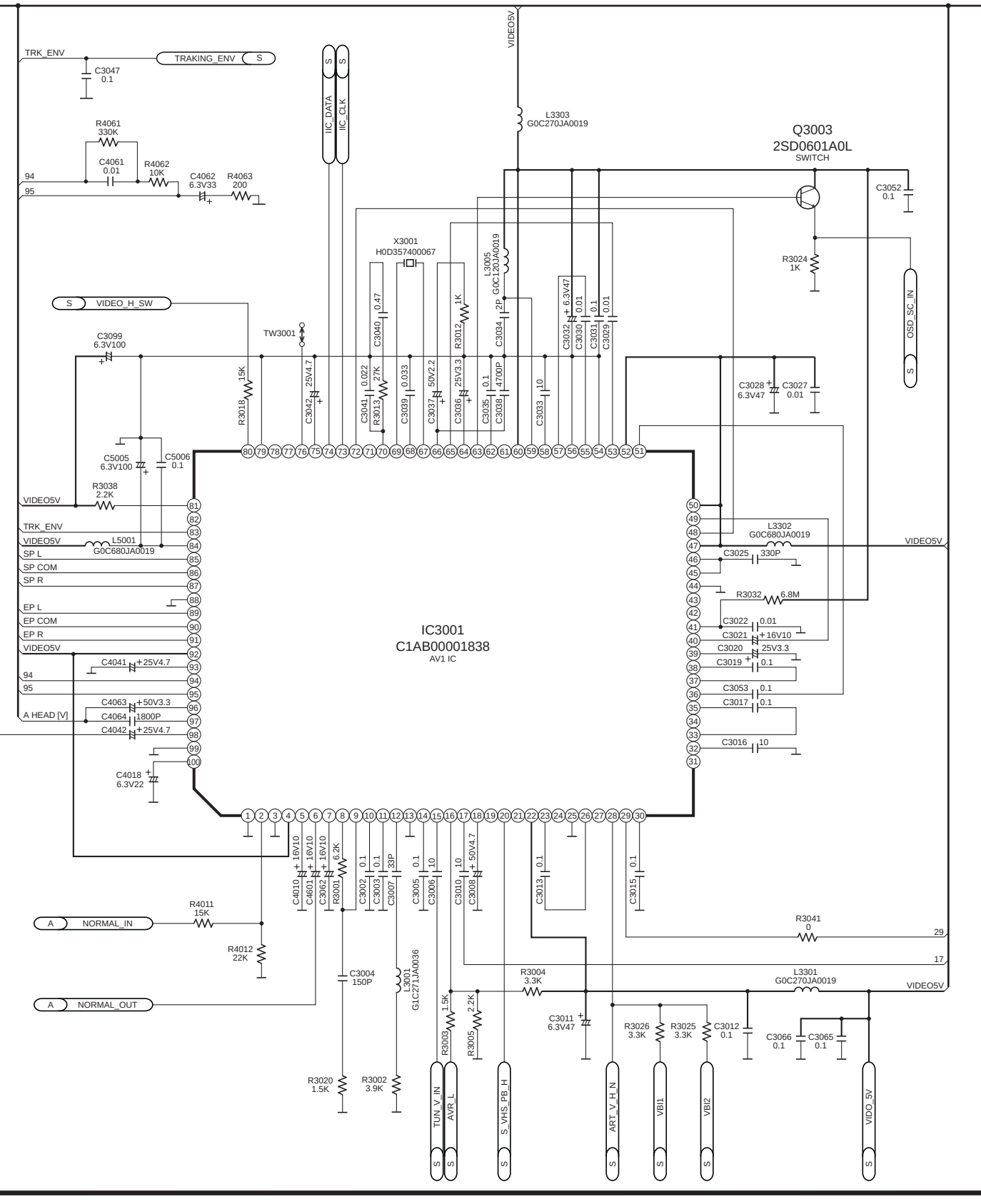
: MAIN SIGNAL LINE



SCHEMATIC DIAGRAM-19

B MAIN (VIDEO:V) CIRCUIT

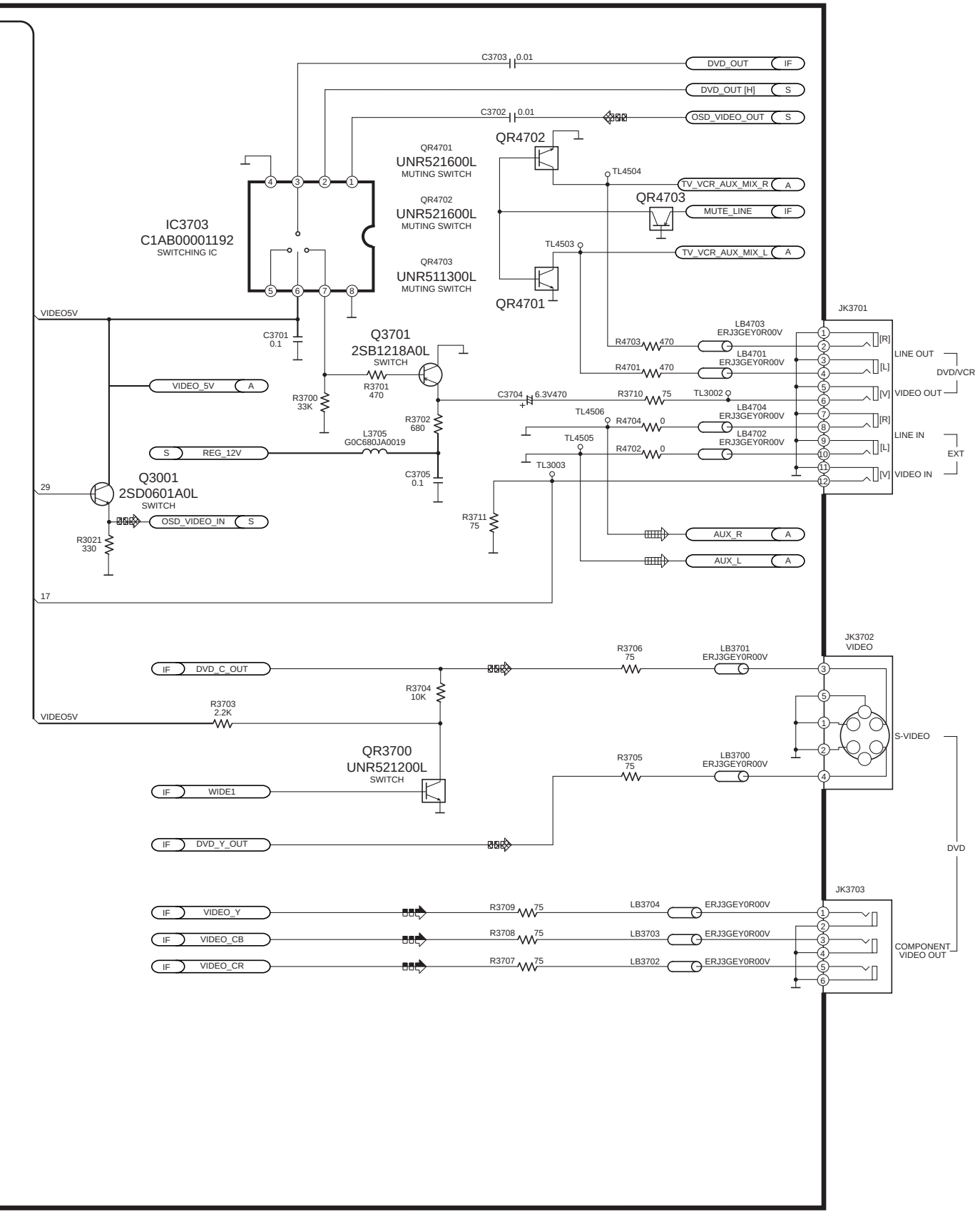
: +B SIGNAL LINE



SCHEMATIC DIAGRAM-20

B MAIN (VIDEO:V) CIRCUIT

: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: VIDEO SIGNAL LINE
: AUXILLARY SIGNAL LINE



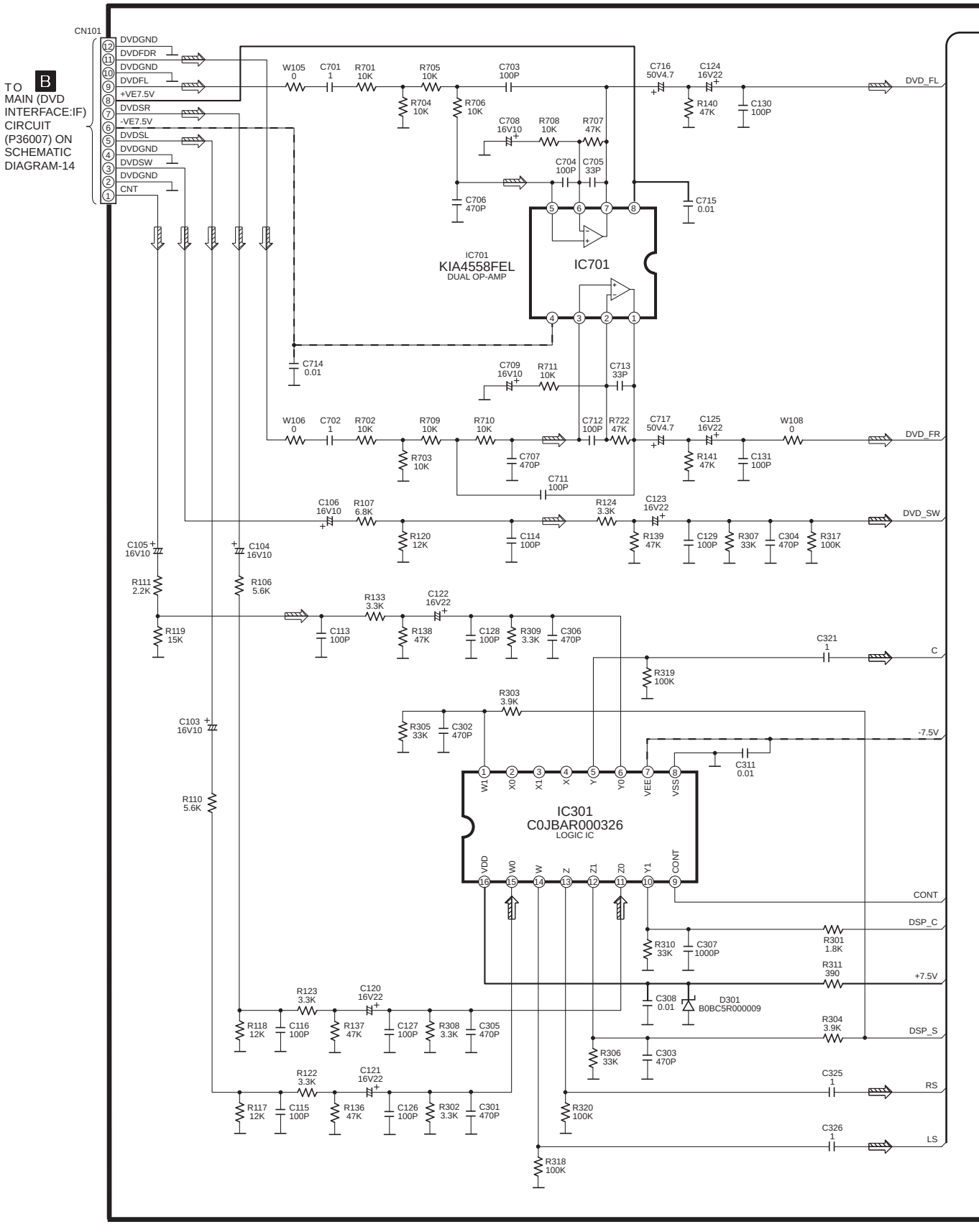
SCHEMATIC DIAGRAM-21

C DSP CIRCUIT

——— : +B SIGNAL LINE

– – – : -B SIGNAL LINE

⇨ : MAIN SIGNAL LINE



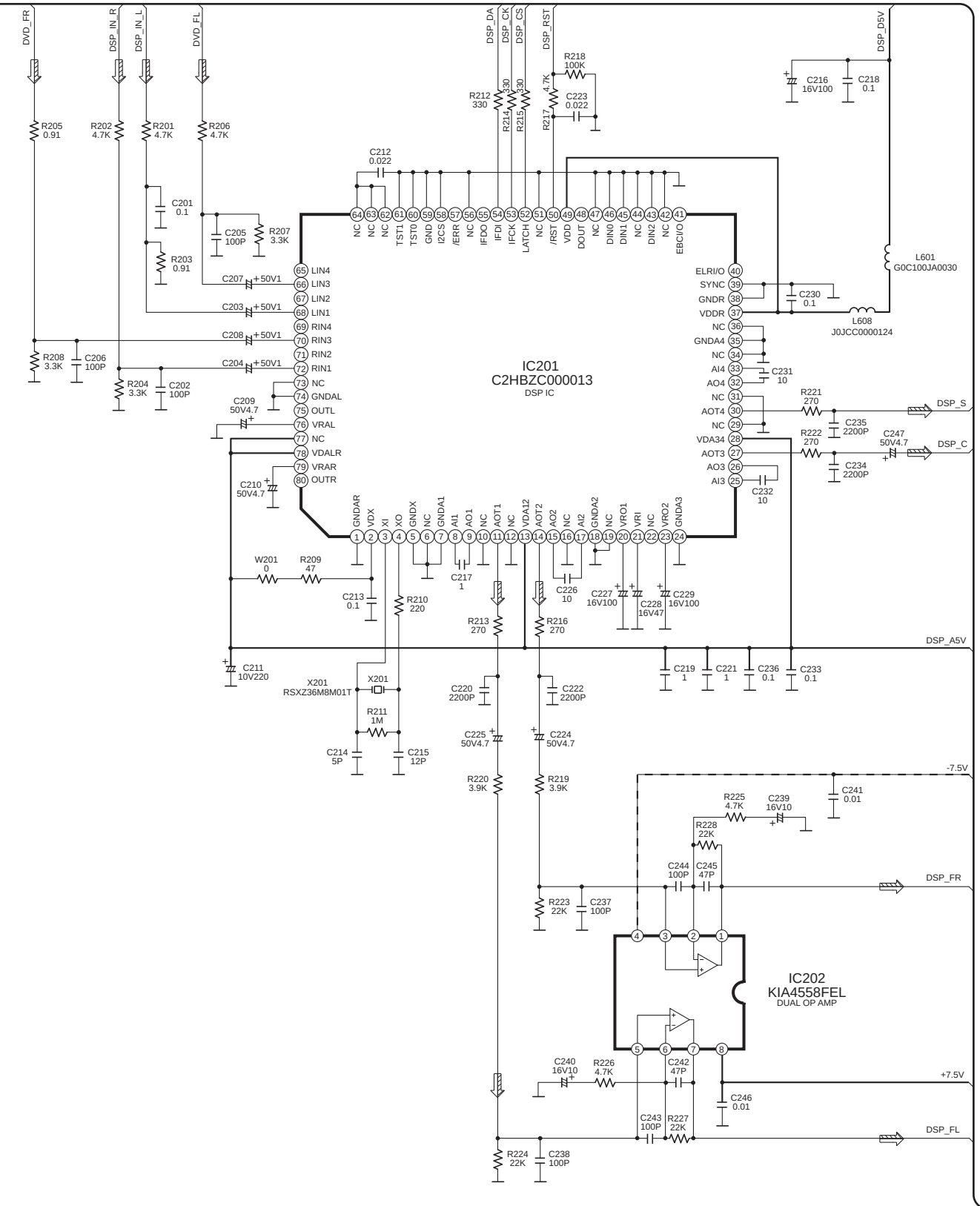
SCHEMATIC DIAGRAM-22

C DSP CIRCUIT

——— : +B SIGNAL LINE

- - - - : -B SIGNAL LINE

⇒ : MAIN SIGNAL LINE



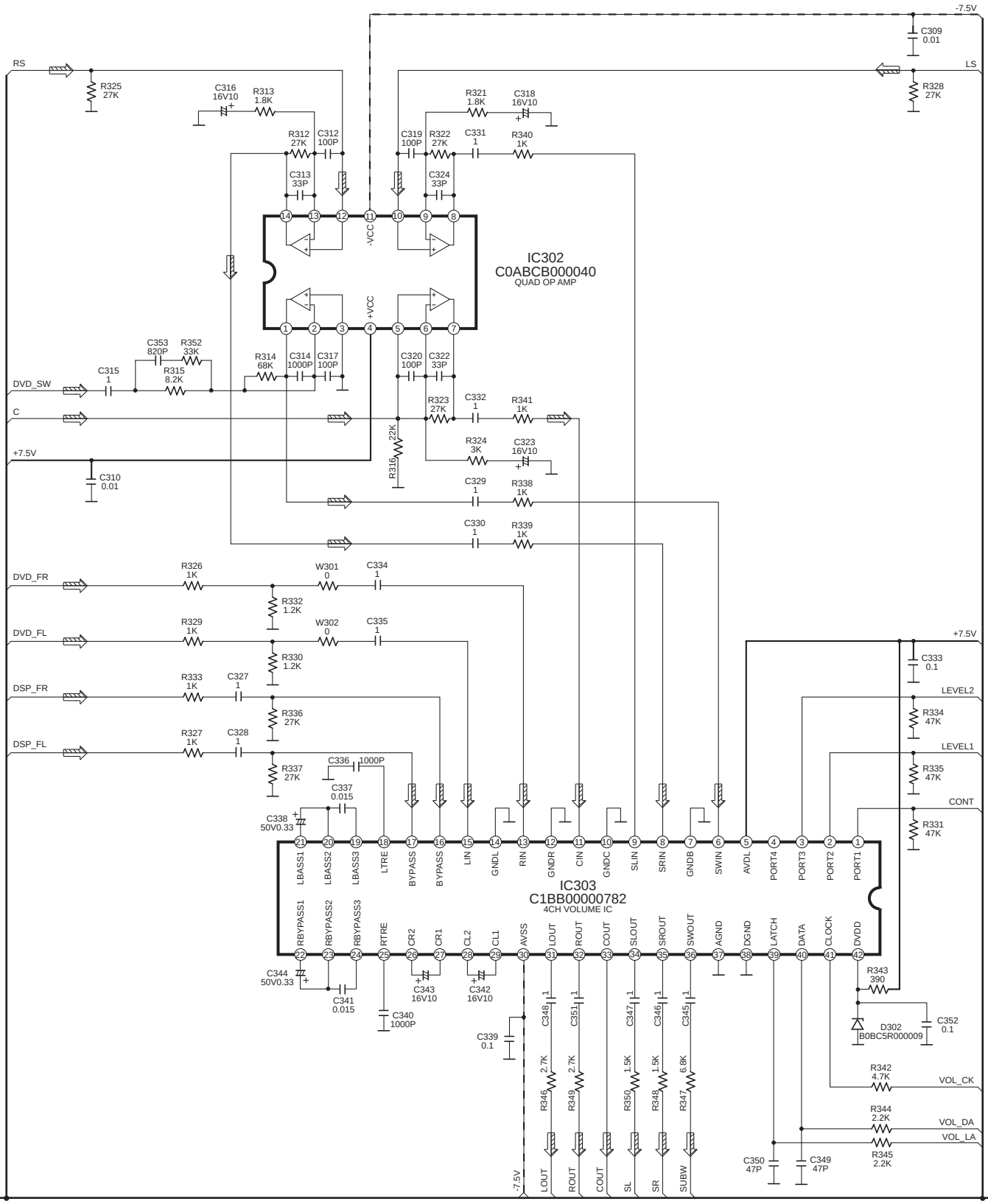
SCHEMATIC DIAGRAM-23

C DSP CIRCUIT

——— : +B SIGNAL LINE

– – – : -B SIGNAL LINE

⇒ : MAIN SIGNAL LINE



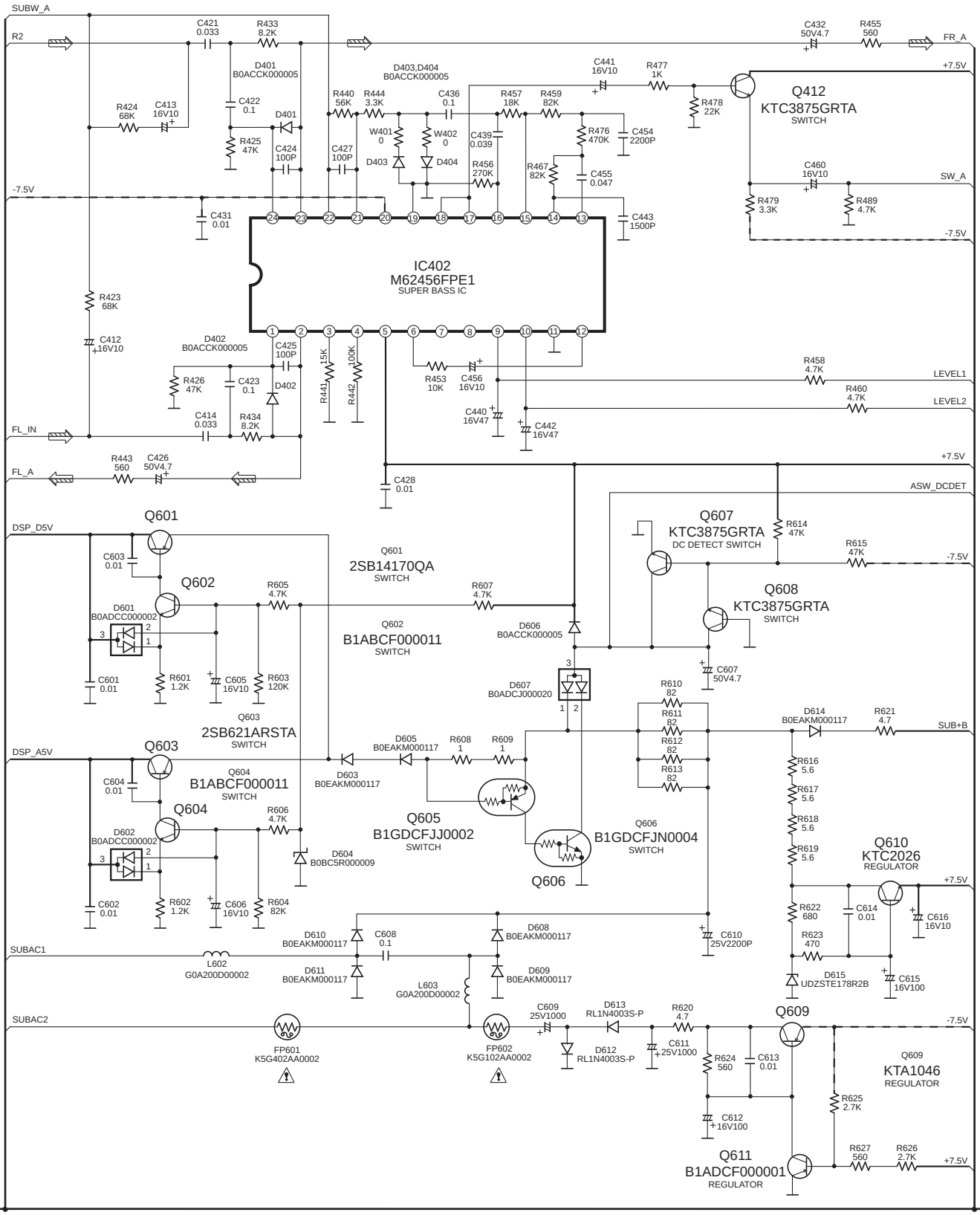
SCHEMATIC DIAGRAM-24

C DSP CIRCUIT

——— : +B SIGNAL LINE

– – – : -B SIGNAL LINE

⇨ : MAIN SIGNAL LINE



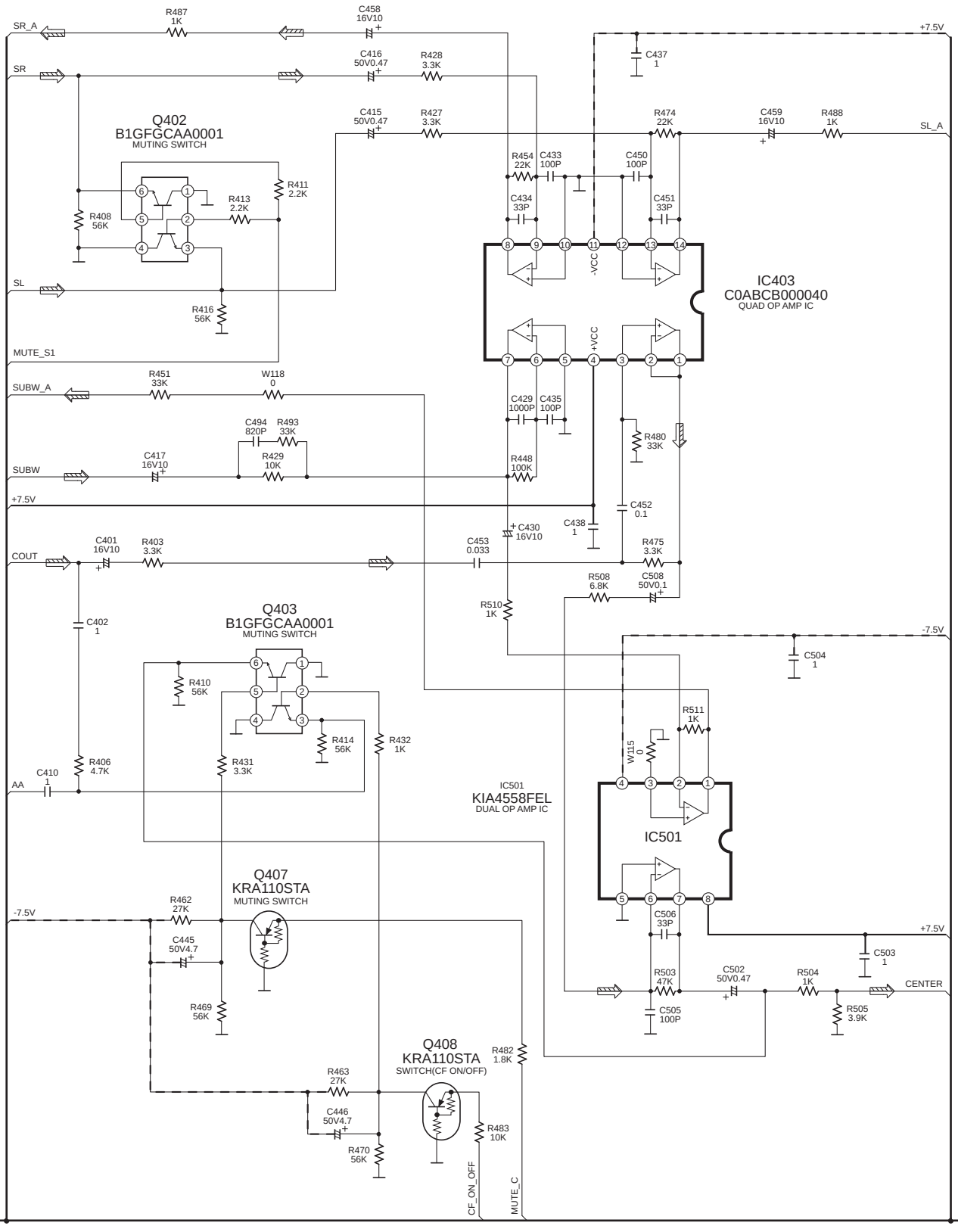
SCHEMATIC DIAGRAM-25

C DSP CIRCUIT

: +B SIGNAL LINE

: -B SIGNAL LINE

: MAIN SIGNAL LINE



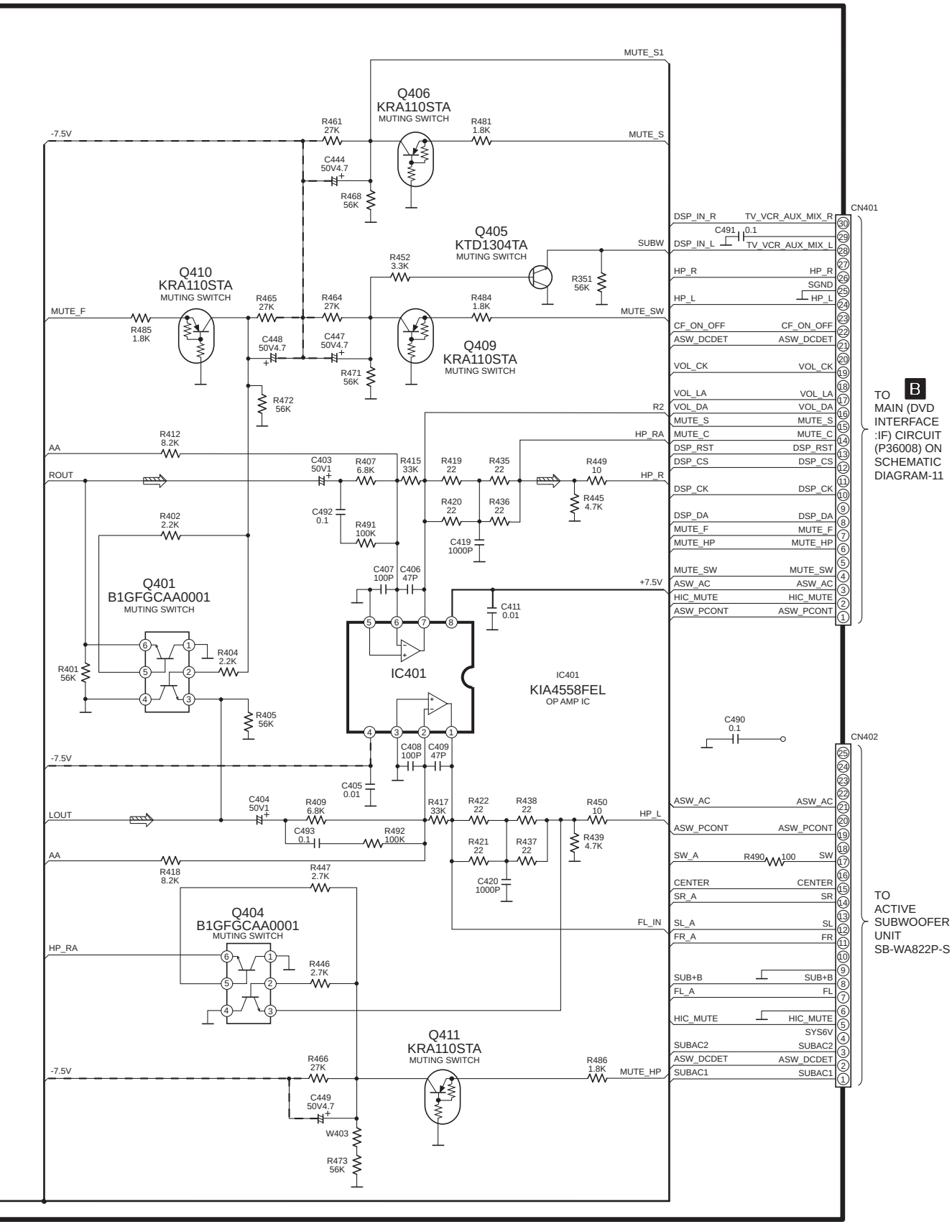
SCHEMATIC DIAGRAM-26

C DSP CIRCUIT

: +B SIGNAL LINE

: -B SIGNAL LINE

: MAIN SIGNAL LINE



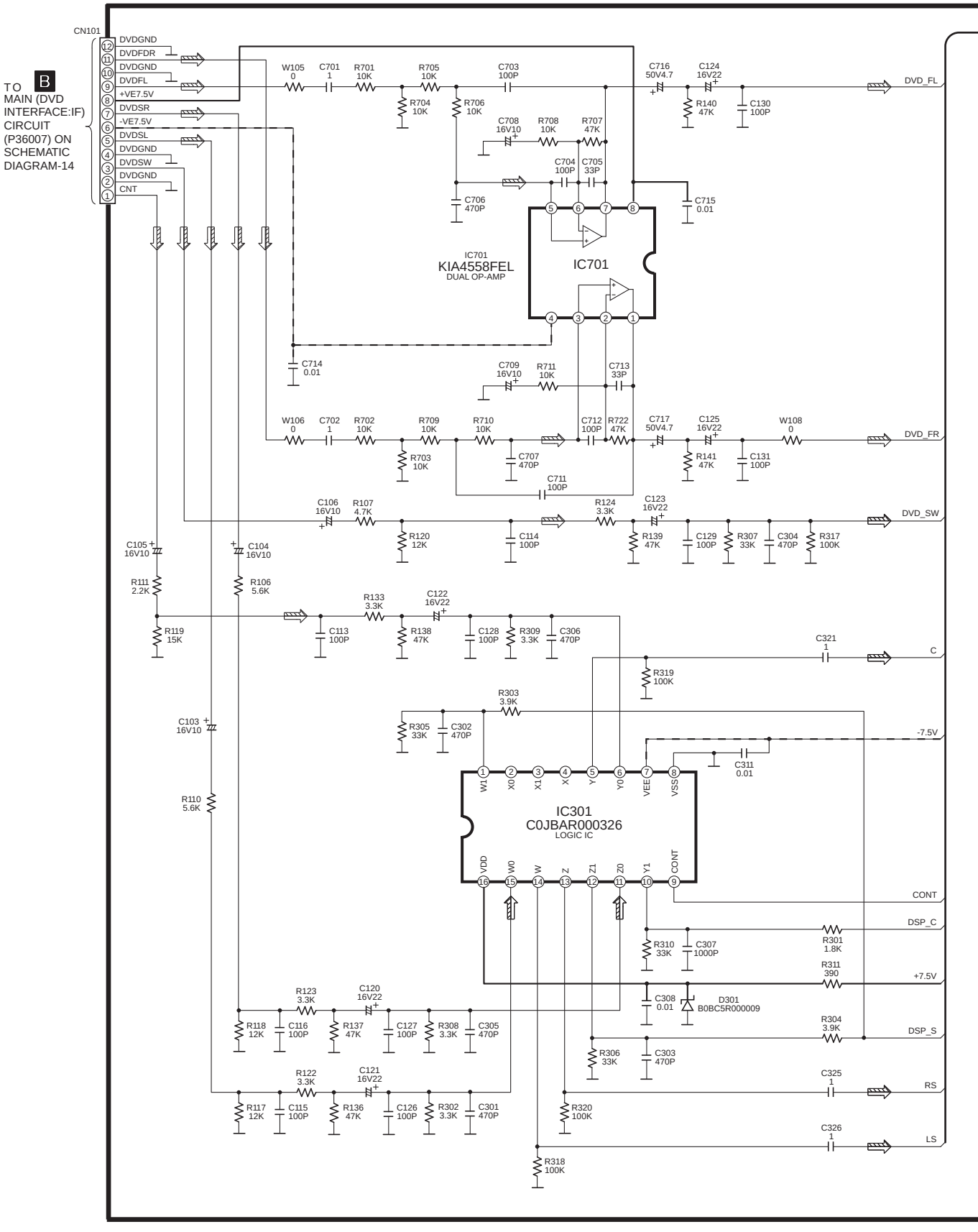
SCHEMATIC DIAGRAM-21

C DSP CIRCUIT

——— : +B SIGNAL LINE

– – – : -B SIGNAL LINE

⇨ : MAIN SIGNAL LINE



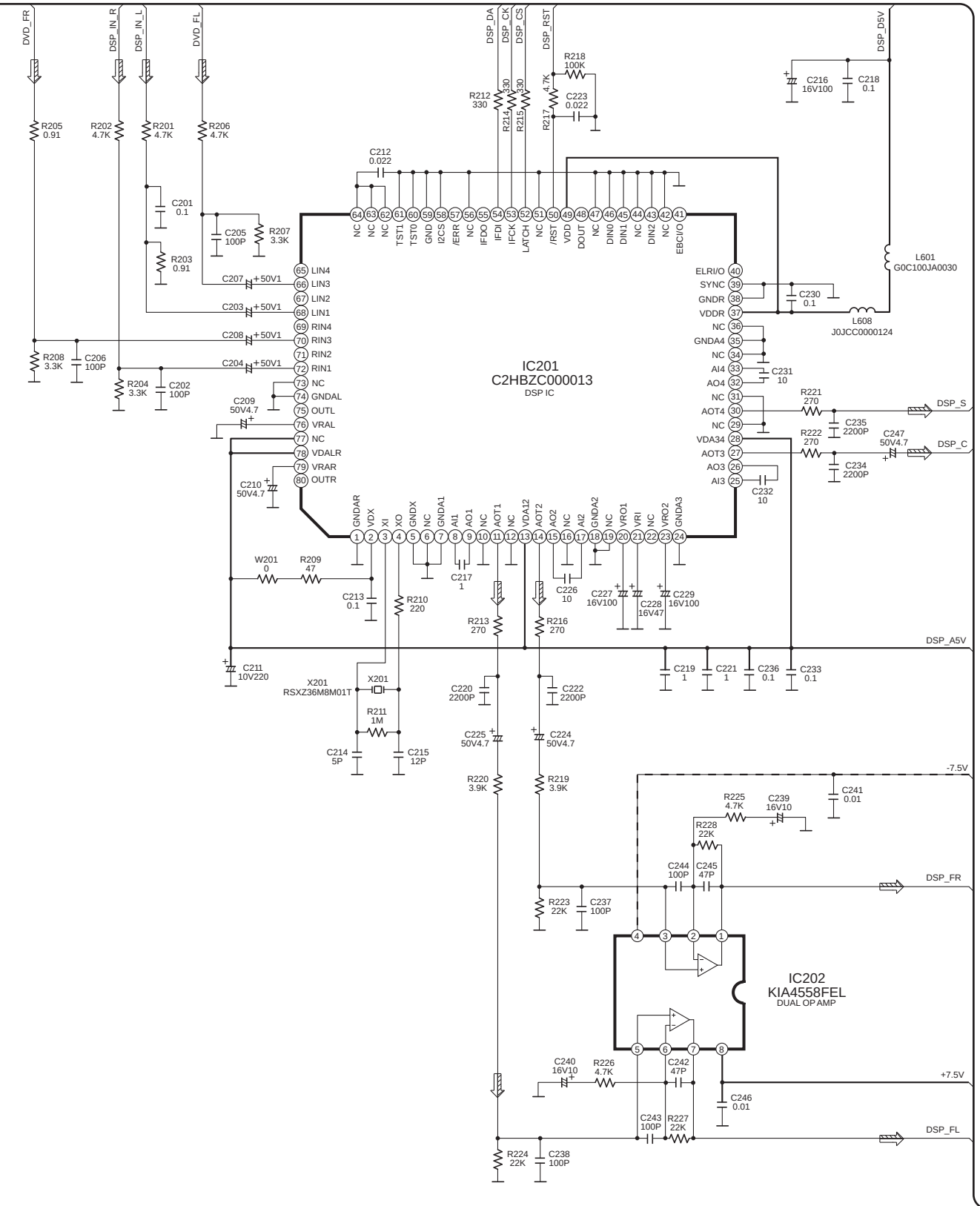
SCHEMATIC DIAGRAM-22

C DSP CIRCUIT

——— : +B SIGNAL LINE

- - - - : -B SIGNAL LINE

⇒ : MAIN SIGNAL LINE



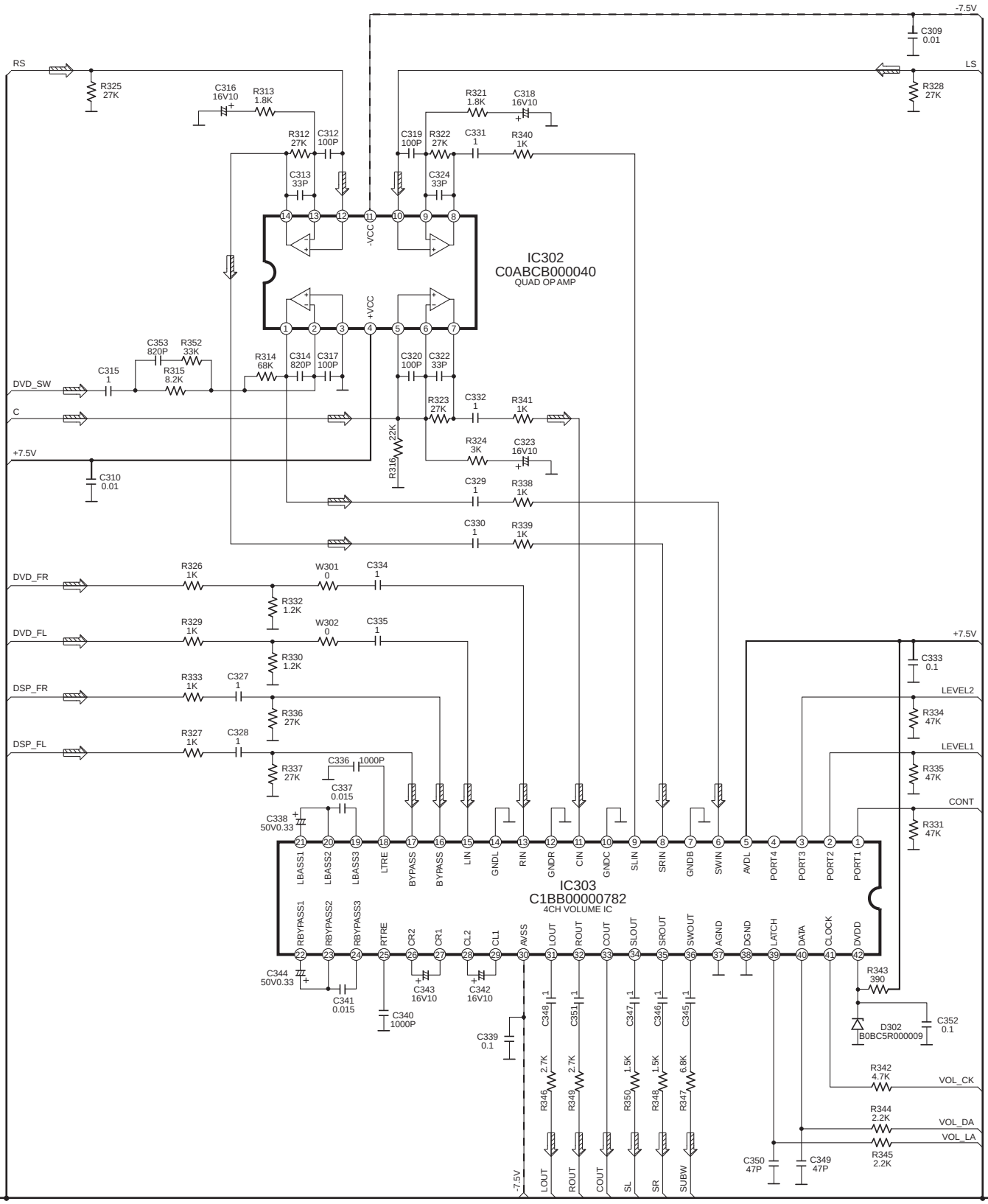
SCHEMATIC DIAGRAM-23

C DSP CIRCUIT

——— : +B SIGNAL LINE

– – – : -B SIGNAL LINE

⇒ : MAIN SIGNAL LINE



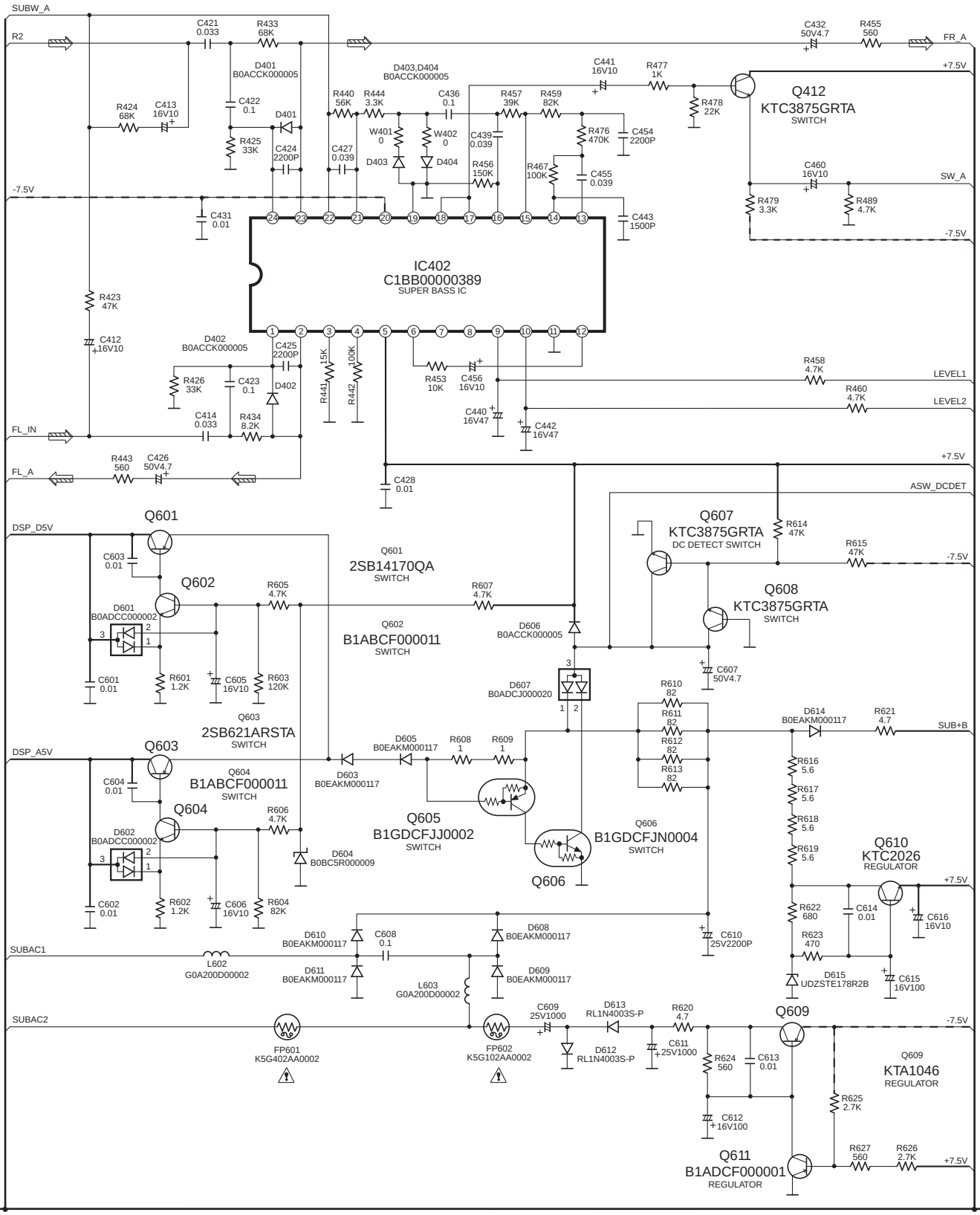
SCHEMATIC DIAGRAM-24

C DSP CIRCUIT

——— : +B SIGNAL LINE

– – – : -B SIGNAL LINE

⇨ : MAIN SIGNAL LINE



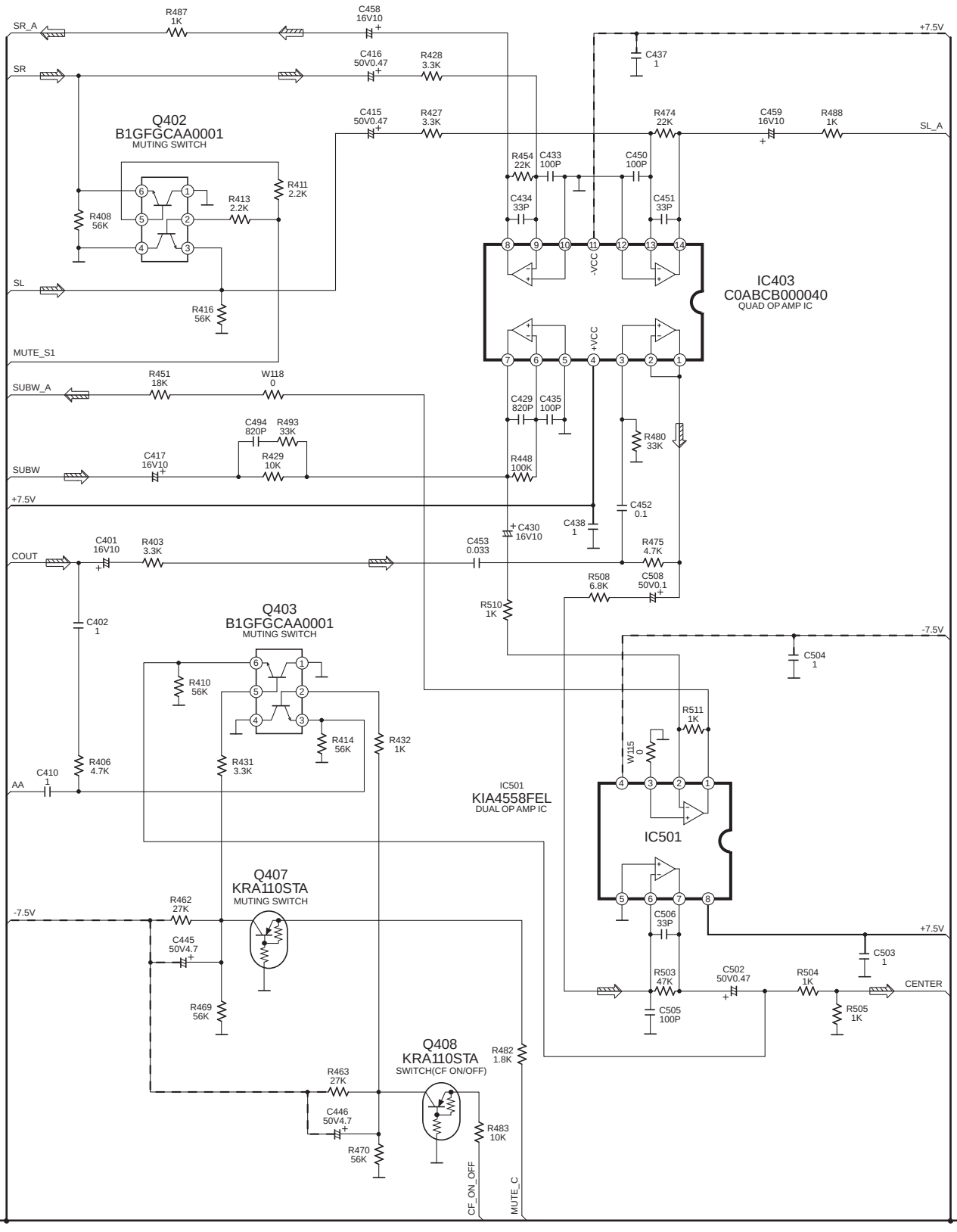
SCHEMATIC DIAGRAM-25

C DSP CIRCUIT

——— : +B SIGNAL LINE

– – – : -B SIGNAL LINE

⇨ : MAIN SIGNAL LINE



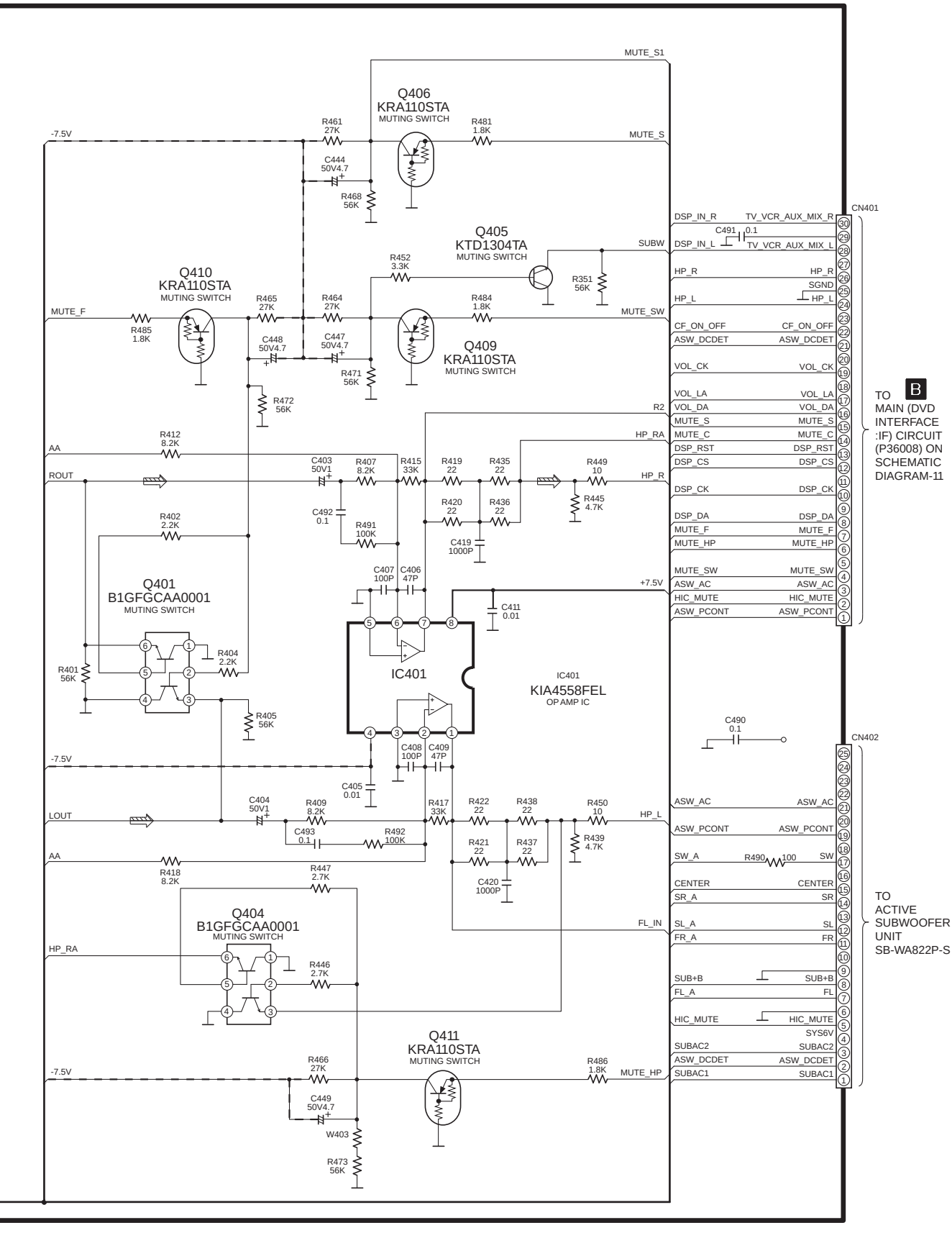
SCHEMATIC DIAGRAM-26

C DSP CIRCUIT

: +B SIGNAL LINE

: -B SIGNAL LINE

: MAIN SIGNAL LINE

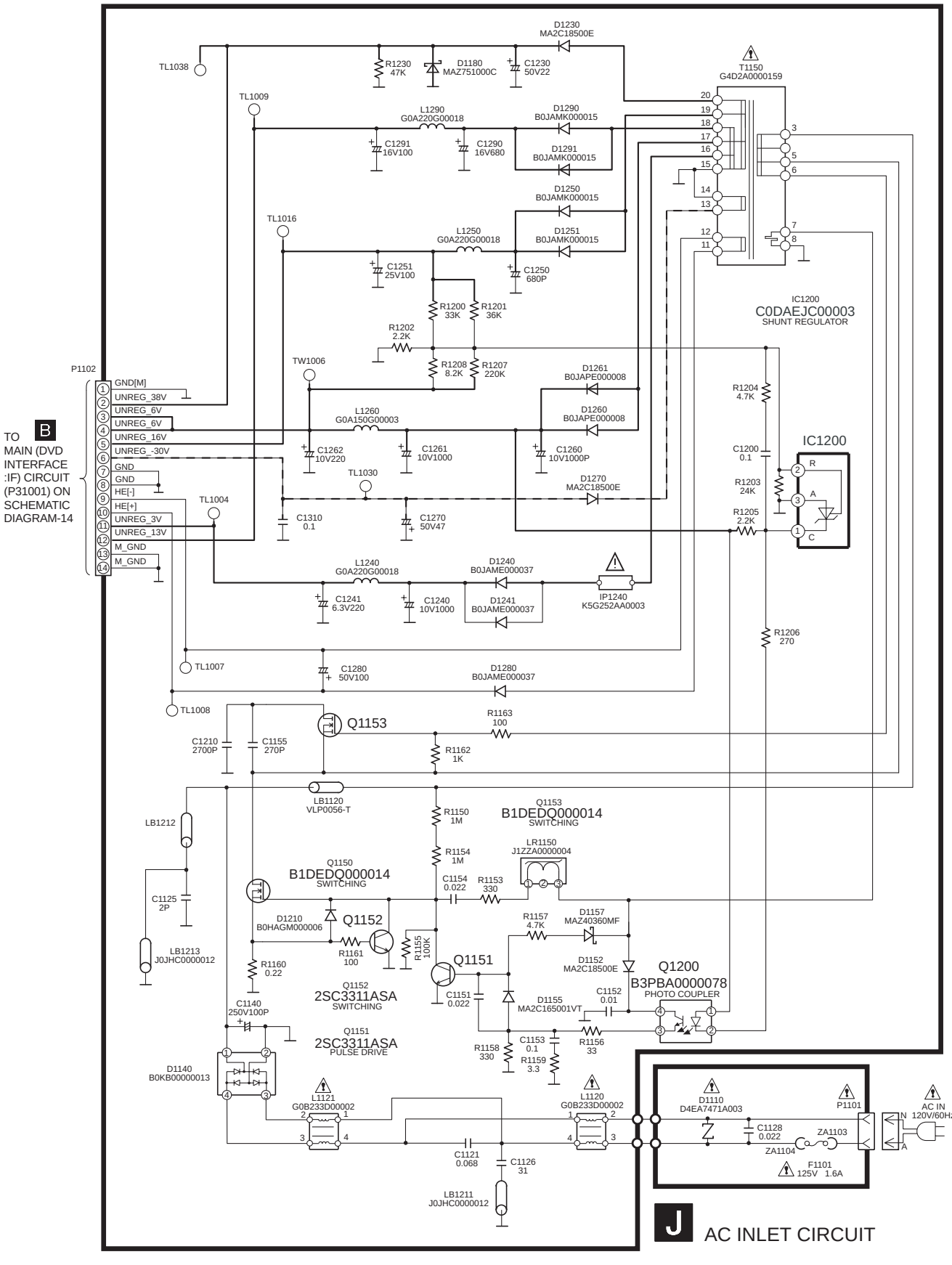


SCHEMATIC DIAGRAM-27

D POWER CIRCUIT

– – – : -B SIGNAL LINE

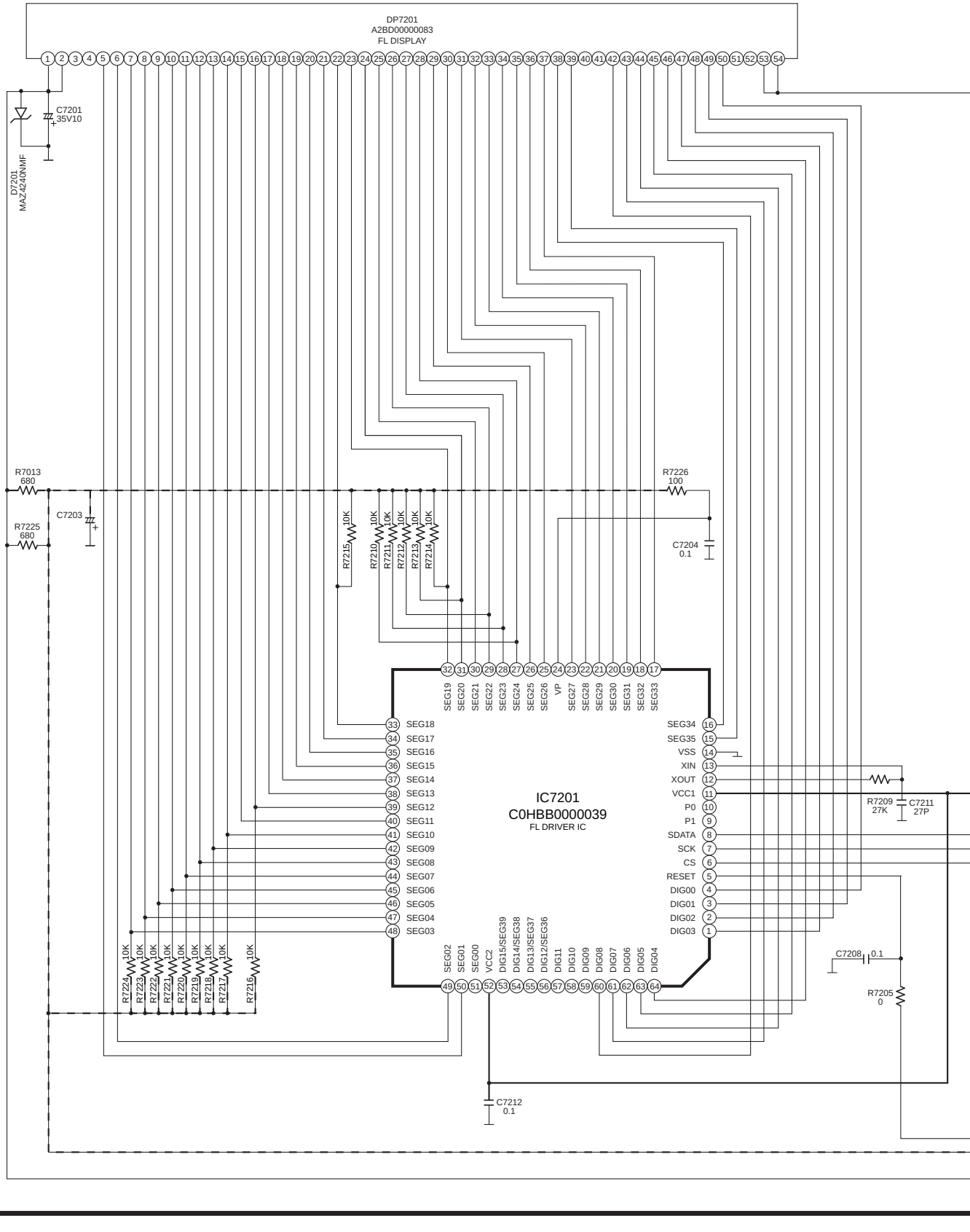
——— : +B SIGNAL LINE



SCHEMATIC DIAGRAM-28

E PANEL B CIRCUIT

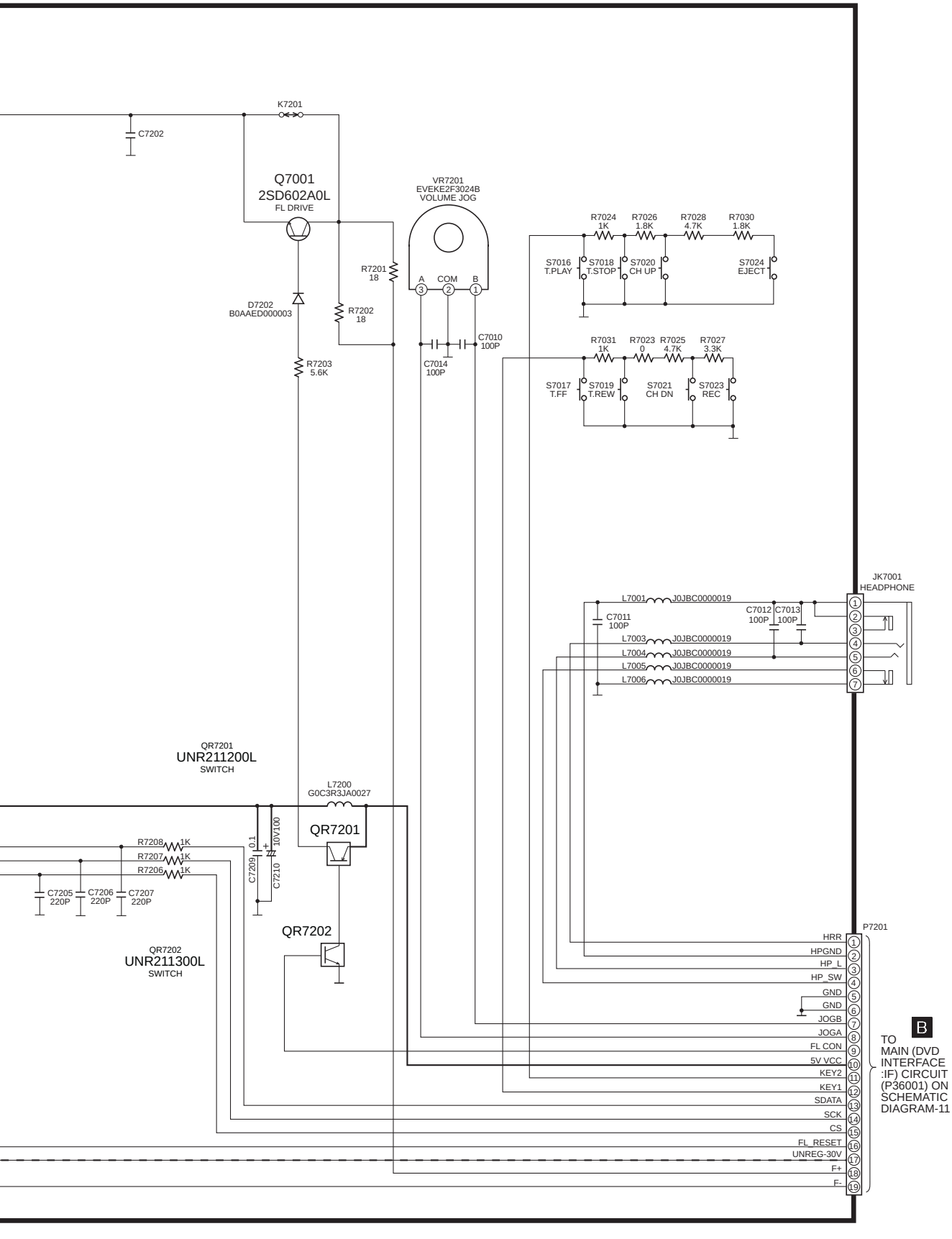
——— : +B SIGNAL LINE
– – – : -B SIGNAL LINE



SCHEMATIC DIAGRAM-29

E PANEL B CIRCUIT

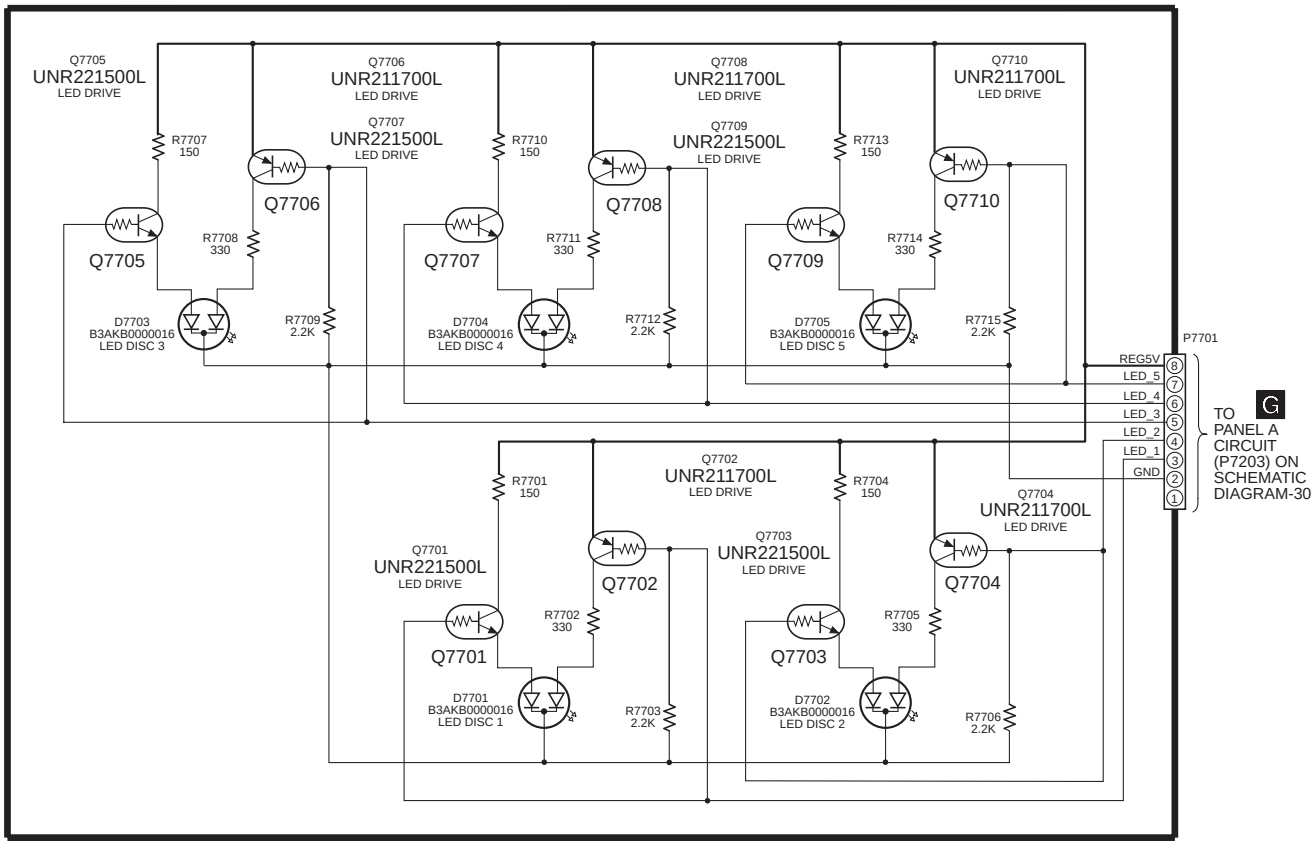
——— : +B SIGNAL LINE
– – – : -B SIGNAL LINE



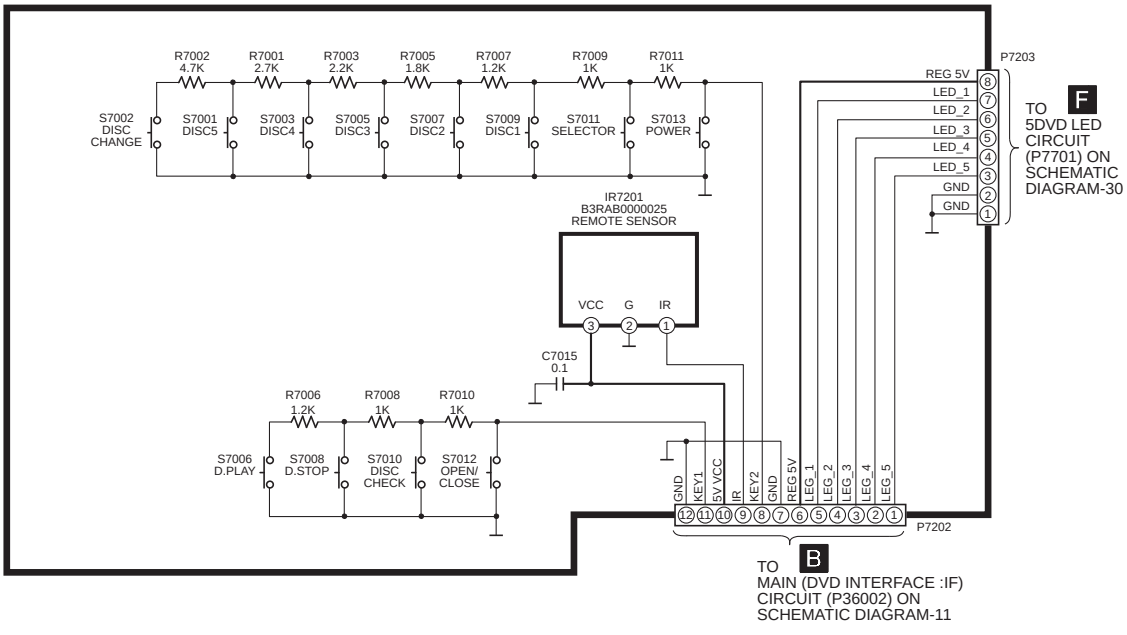
SCHEMATIC DIAGRAM-30

F 5DVD LED CIRCUIT

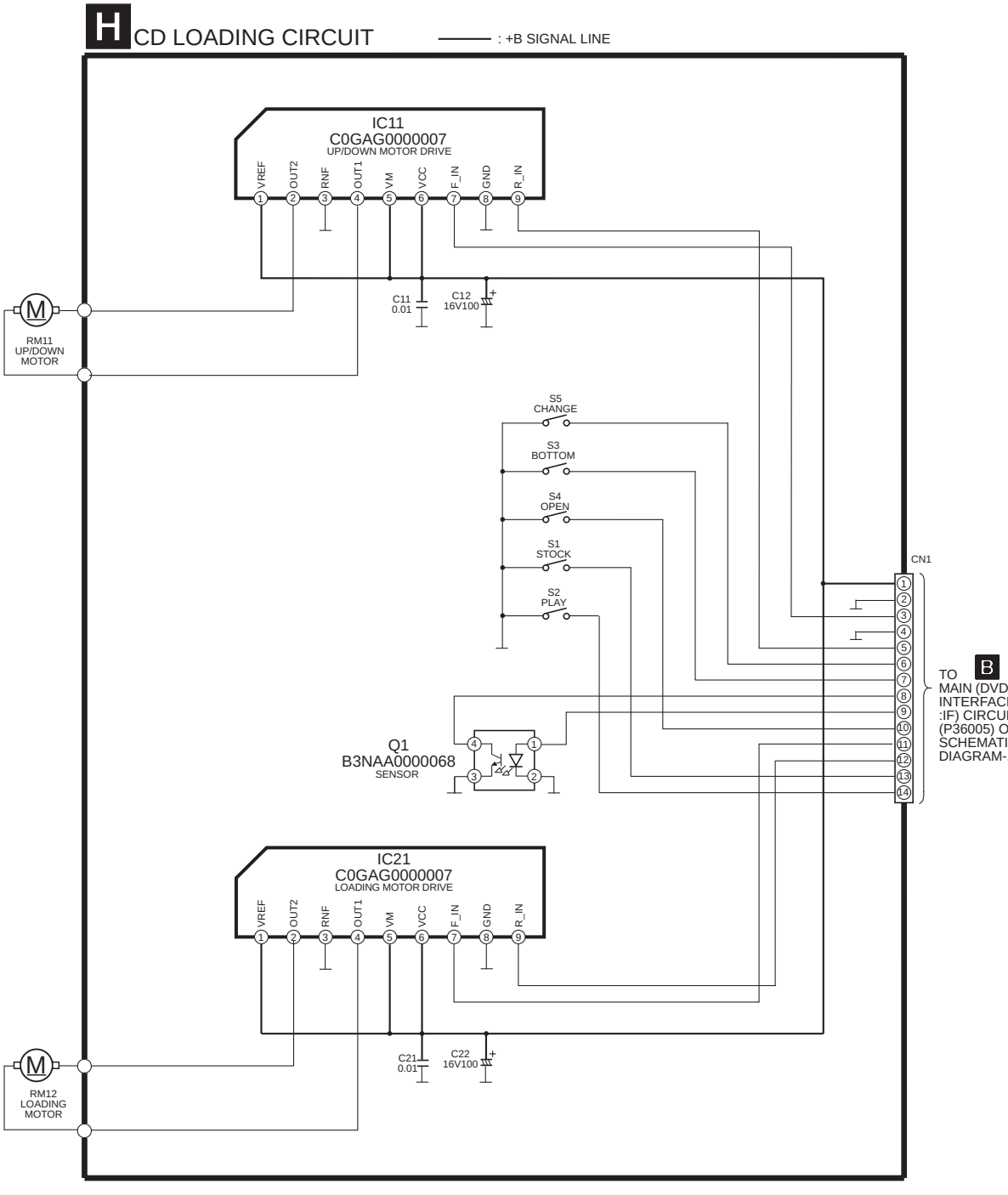
: +B SIGNAL LINE



G PANEL A CIRCUIT

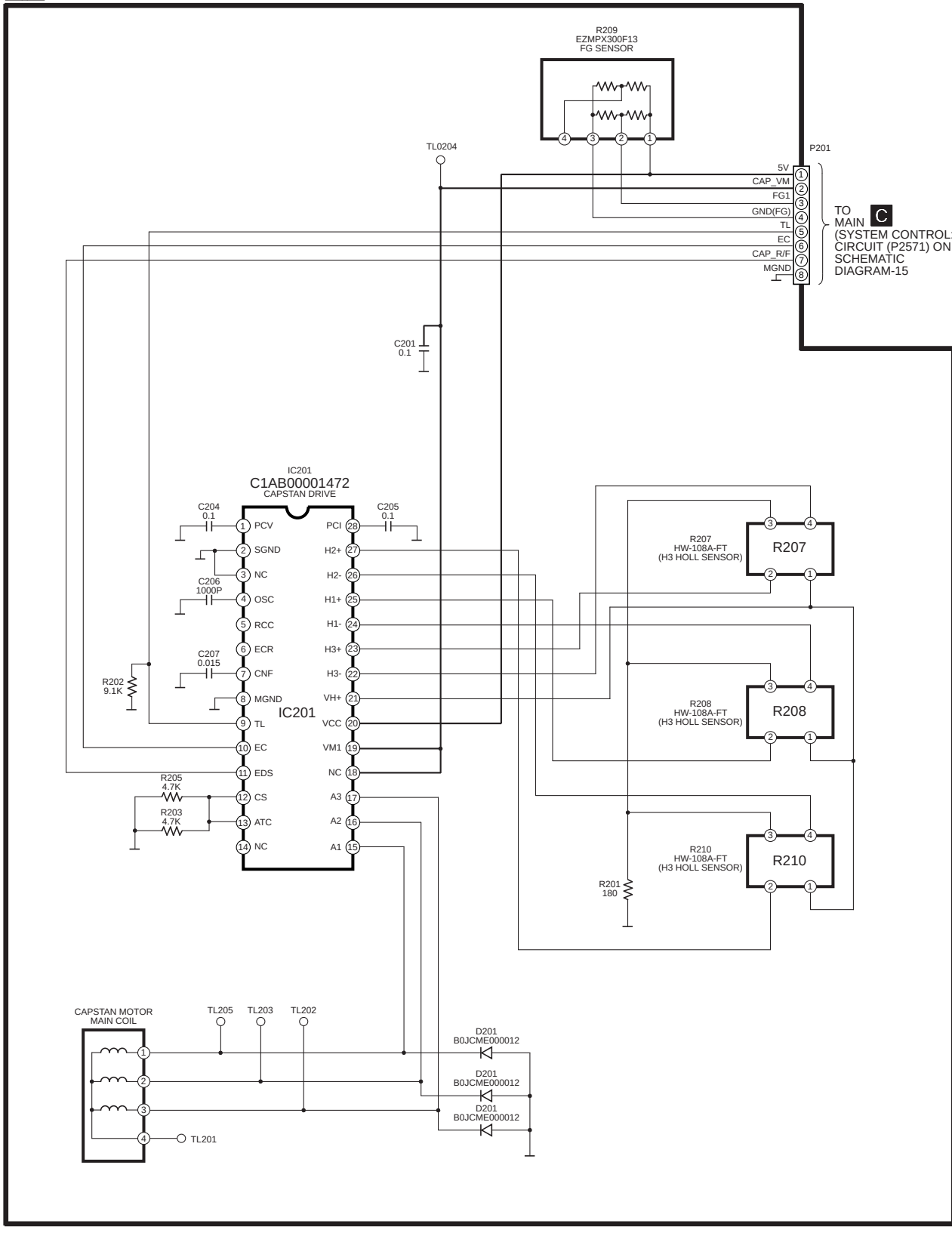


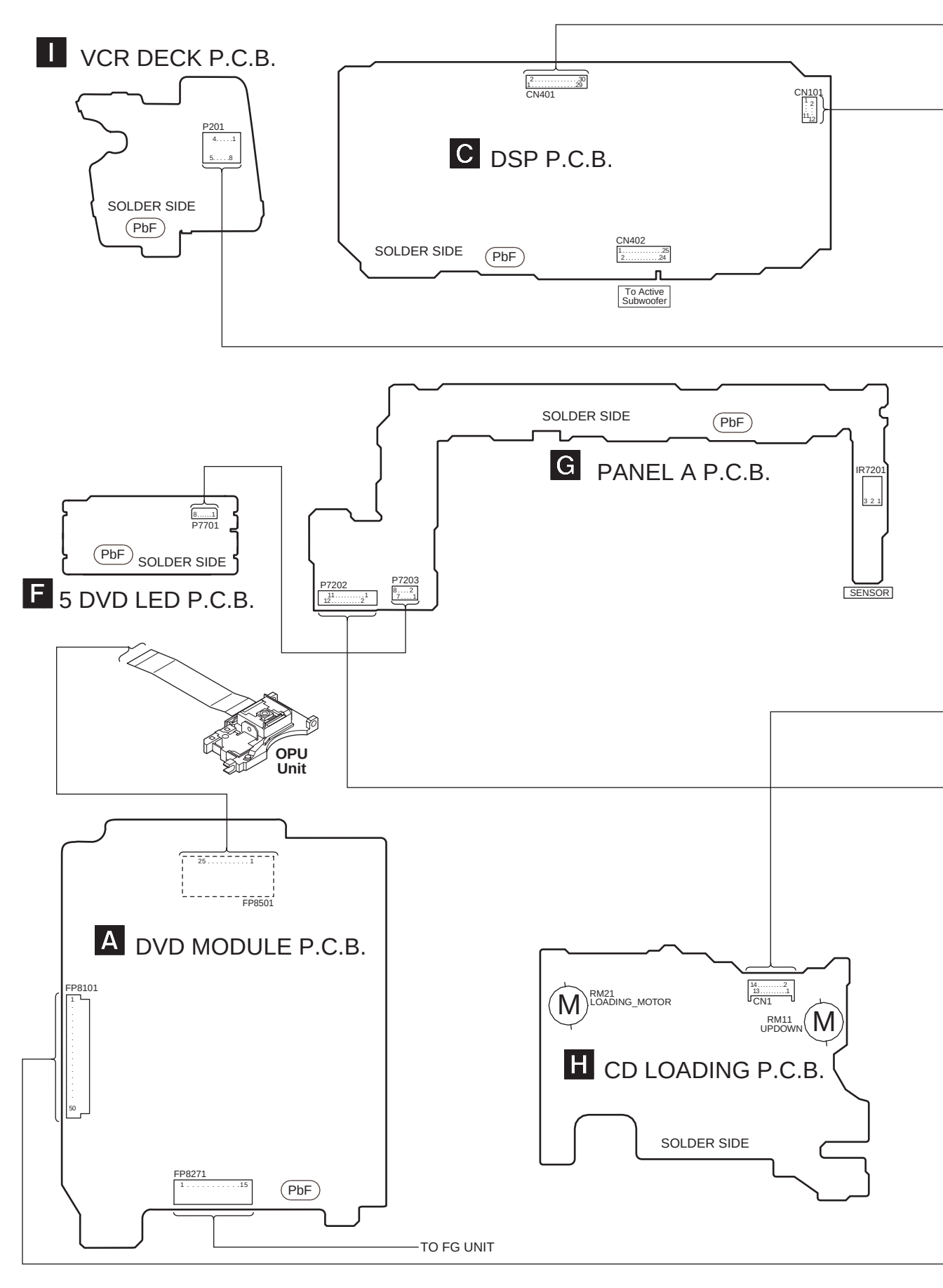
SCHEMATIC DIAGRAM-31

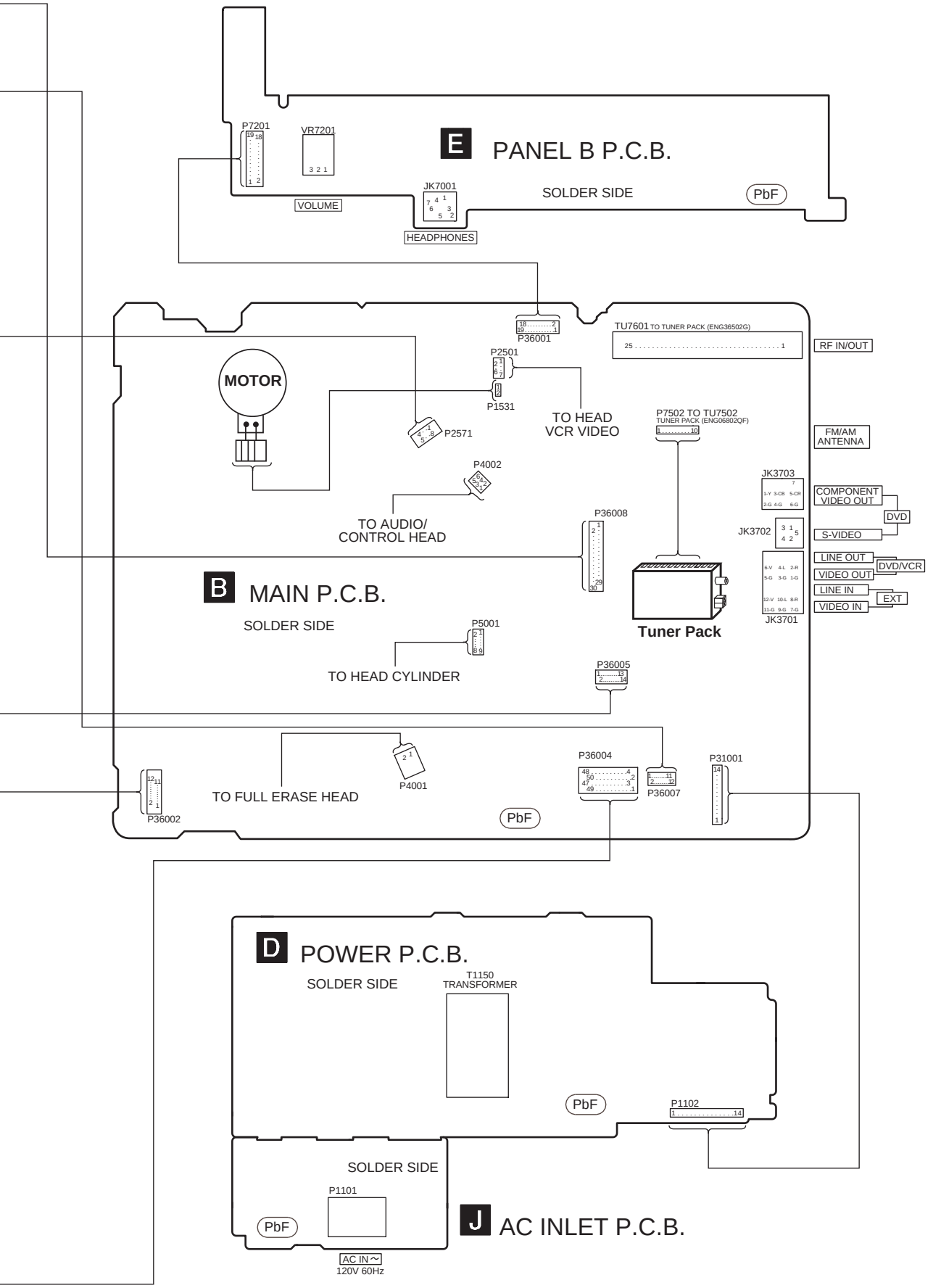


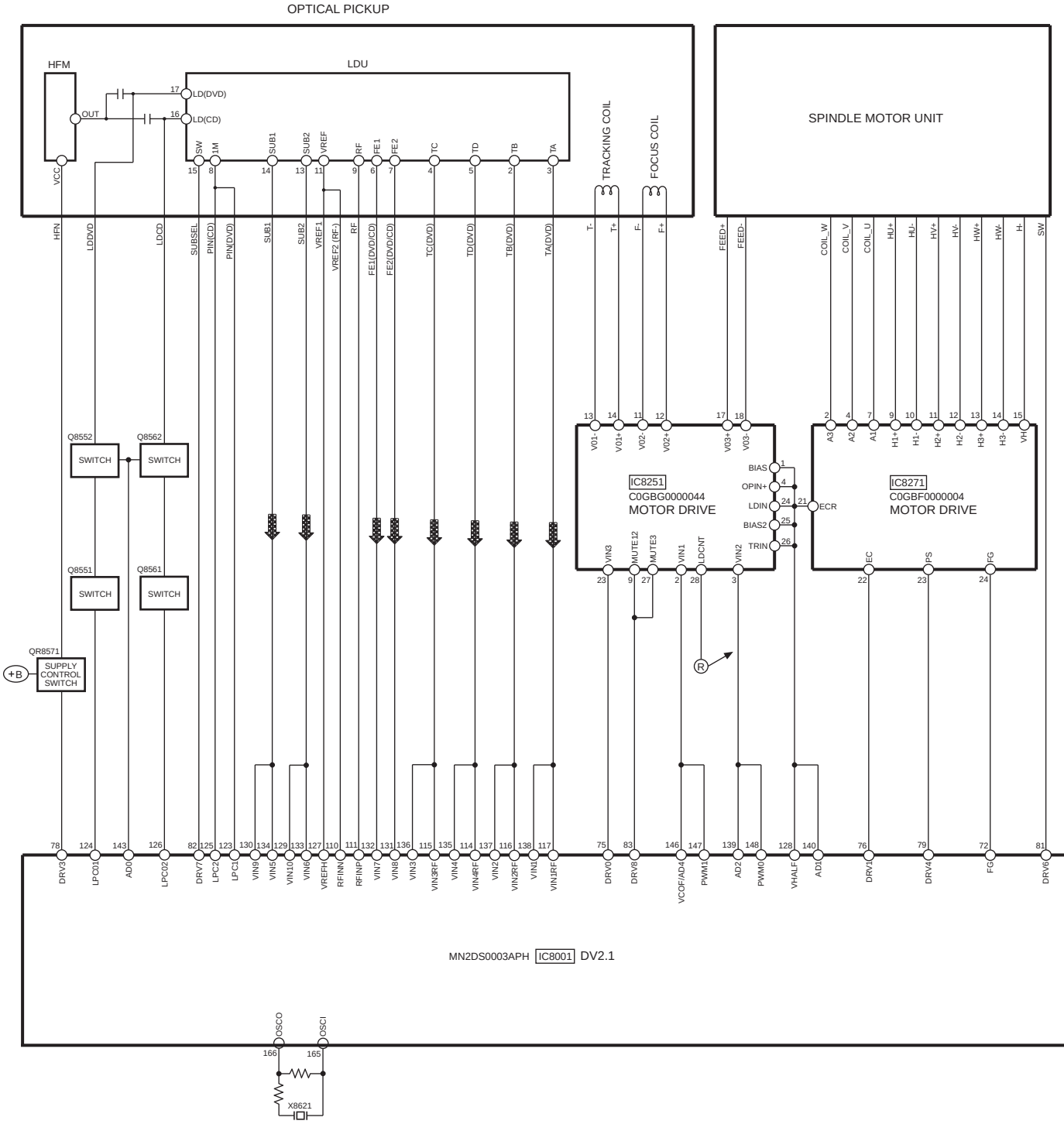
I VCR DECK CIRCUIT

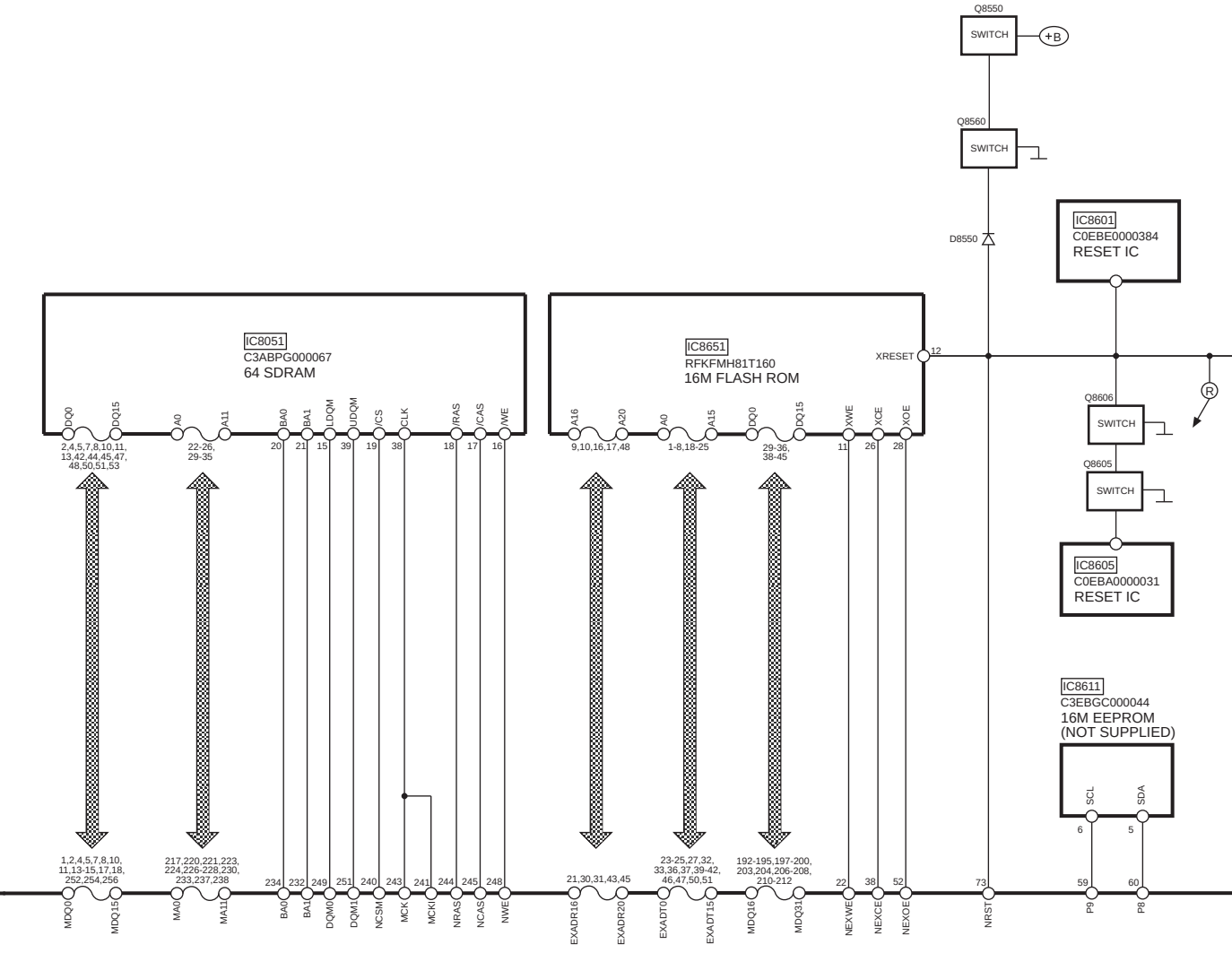
——— : +B SIGNAL LINE



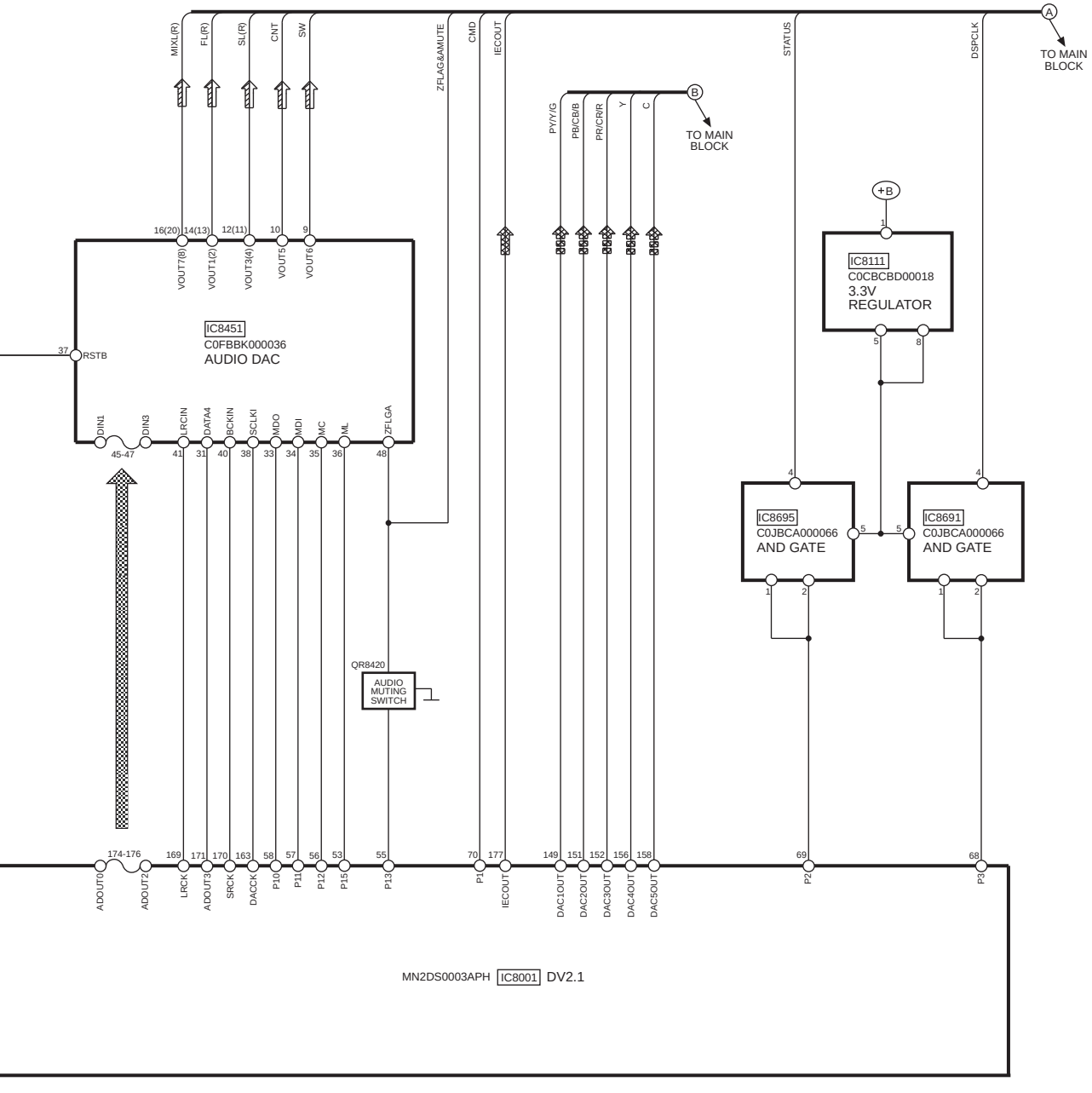

I VCR DECK P.C.B.
P201
4.....1
5.....8
SOLDER SIDE
PbF
C DSP P.C.B.
CN401
2.....30
1.....29
CN101
1
2
11
12
SOLDER SIDE
PbF
CN402
1.....25
2.....24
To Active Subwoofer
G PANEL A P.C.B.
SOLDER SIDE
PbF
IR7201
3 2 1
SENSOR
P7202
11.....1
12.....2
P7203
8.....2
7.....1
P7701
8.....1
PbF
SOLDER SIDE
F 5 DVD LED P.C.B.
OPU Unit
A DVD MODULE P.C.B.
25.....1
FP8501
FP8101
1
50
FP8271
1.....15
PbF
TO FG UNIT
H CD LOADING P.C.B.
M
RM21
LOADING_MOTOR
14.....2
13.....1
CN1
RM11
UPDOWN
M
SOLDER SIDE


E PANEL B P.C.B.
SOLDER SIDE
PbF
P7201
VR7201
VOLUME
JK7001
HEADPHONES
P36001
TU7601 TO TUNER PACK (ENG36502G)
RF IN/OUT
MOTOR
P2501
P1531
P2571
TO HEAD
VCR VIDEO
P7502 TO TU7502
TUNER PACK (ENG06802QF)
FM/AM
ANTENNA
P4002
JK3703
COMPONENT
VIDEO OUT
DVD
JK3702
S-VIDEO
TO AUDIO/
CONTROL HEAD
P36008
LINE OUT
DVD/VCR
VIDEO OUT
LINE IN
EXT
VIDEO IN
B MAIN P.C.B.
SOLDER SIDE
P5001
Tuner Pack
JK3701
TO HEAD CYLINDER
P36005
P4001
P36004
P31001
TO FULL ERASE HEAD
P36007
P36002
PbF
D POWER P.C.B.
SOLDER SIDE
T1150
TRANSFORMER
PbF
P1102
SOLDER SIDE
P1101
PbF
J AC INLET P.C.B.
AC IN
120V 60Hz

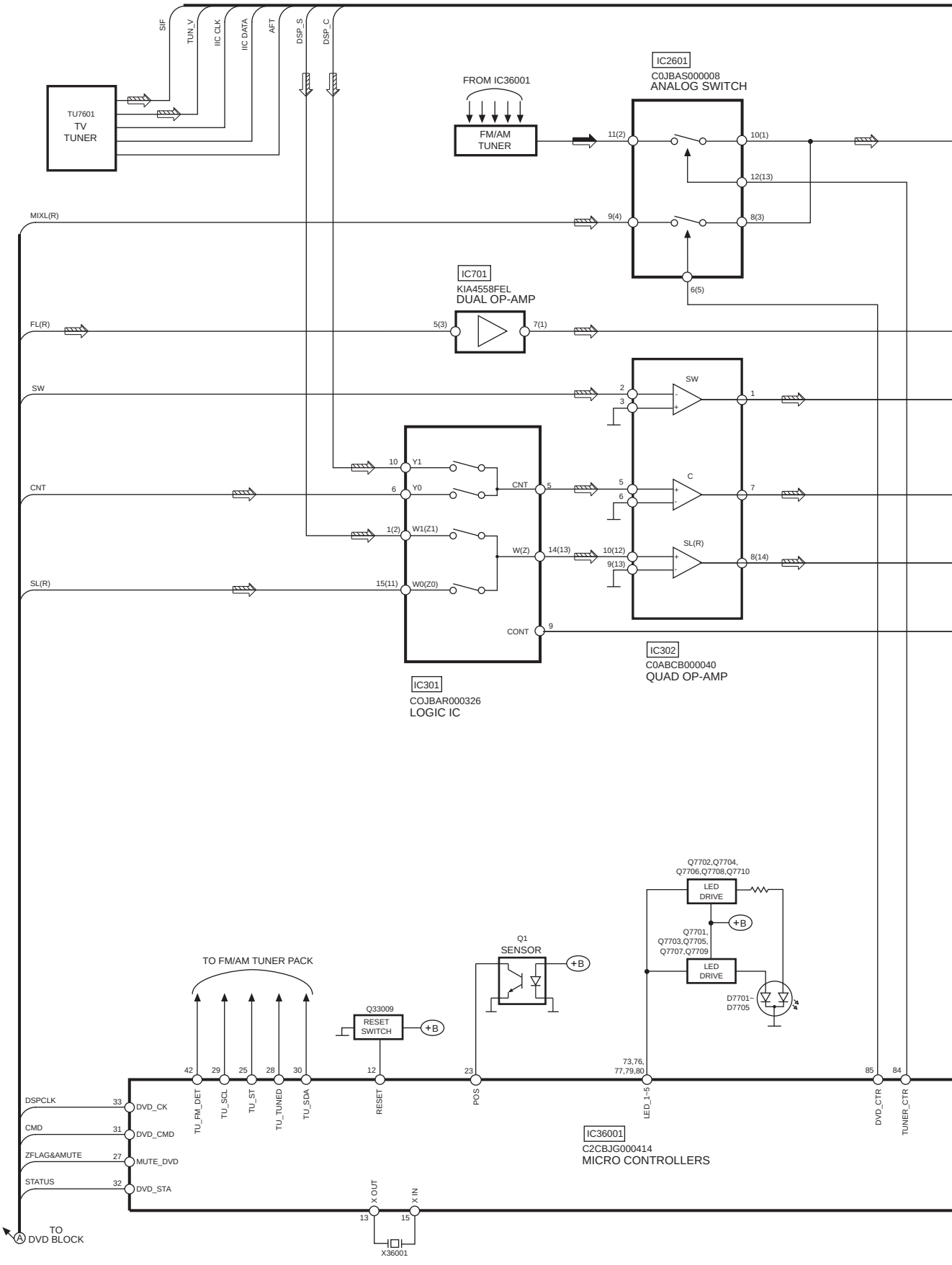

OPTICAL PICKUP
HFM
LDU
OUT
17
LD(DVD)
16
LD(CD)
VCC
SW
1M
SUB1
SUB2
VREF
RF
FE1
FE2
TC
TD
TB
TA
15
8
14
13
11
9
6
7
4
5
2
3
TRACKING COIL
FOCUS COIL
SPINDLE MOTOR UNIT
HFN
LDDVD
LDCD
SUBSEL
PIN(CD)
PIN(DVD)
SUB1
SUB2
VREF1
VREF2 (RF-)
RF
FE1(DVD/CD)
FE2(DVD/CD)
TC(DVD)
TD(DVD)
TB(DVD)
TA(DVD)
T-
T+
F-
F+
FEED+
FEED-
COIL_W
COIL_V
COIL_U
HU+
HU-
HV+
HV-
HW+
HW-
H-
SW
Q8552
Q8562
Q8551
Q8561
SWITCH
QR8571
+B
SUPPLY CONTROL SWITCH
IC8251
C0GBG0000044
MOTOR DRIVE
IC8271
C0GBF0000004
MOTOR DRIVE
BIAS
OPIN+
LDIN
BIAS2
TRIN
ECR
VIN3
MUTE12
MUTE3
VIN1
LDCNT
VIN2
EC
PS
FG
R
DRV3
LPC01
AD0
LPC02
DRV7
LPC2
LPC1
VIN9
VIN5
VIN10
VIN6
VREFH
RFINN
RFINP
VIN7
VIN8
VIN3
VIN3RF
VIN4
VIN4RF
VIN2
VIN2RF
VIN1
VIN1RF
DRV0
DRV8
VCOF/AD4
PWM1
AD2
PWM0
VHALF
AD1
DRV1
DRV4
FG
DRV6
MN2DS0003APH
IC8001
DV2.1
OSCO
OSCI
X8621

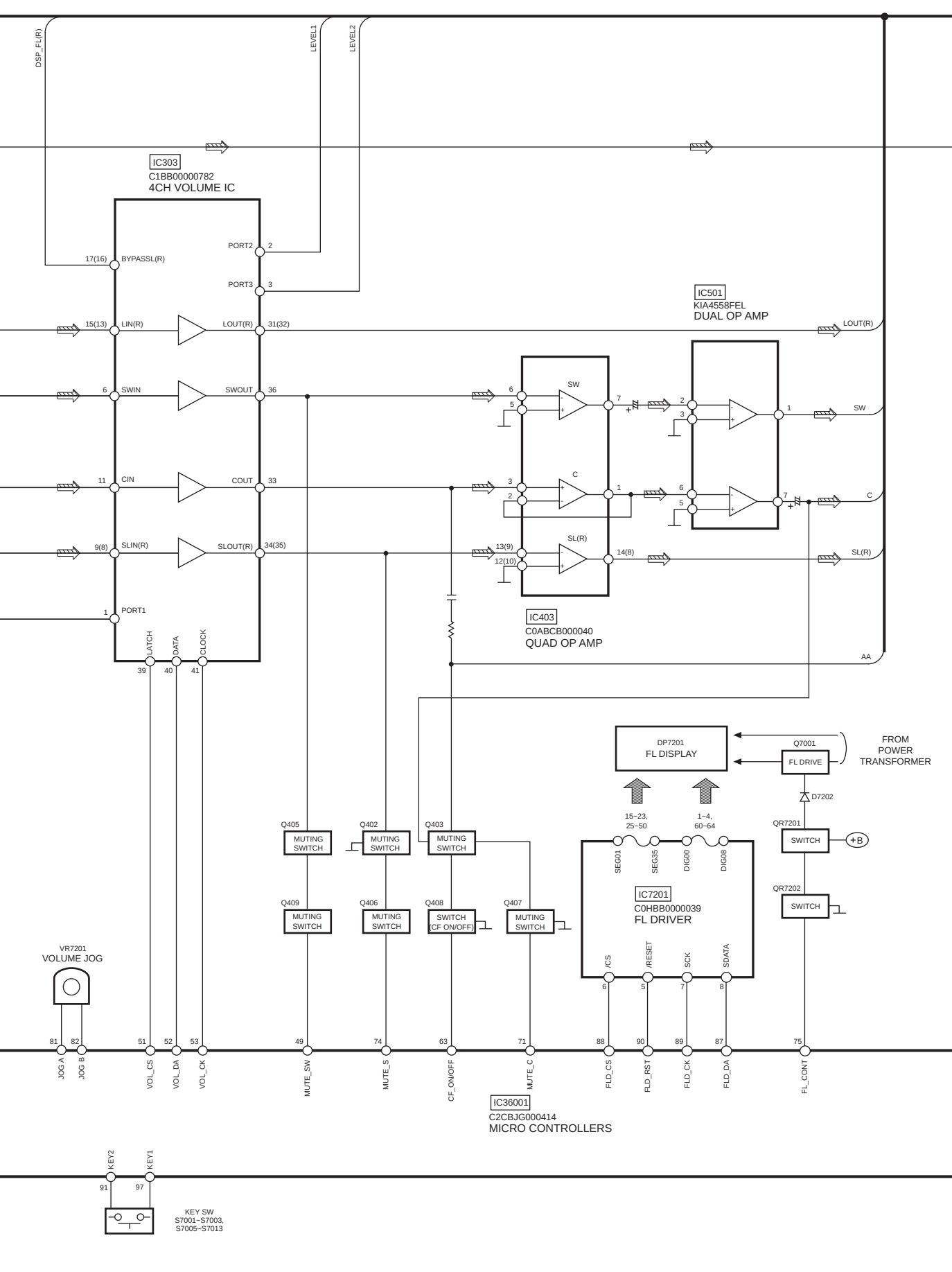


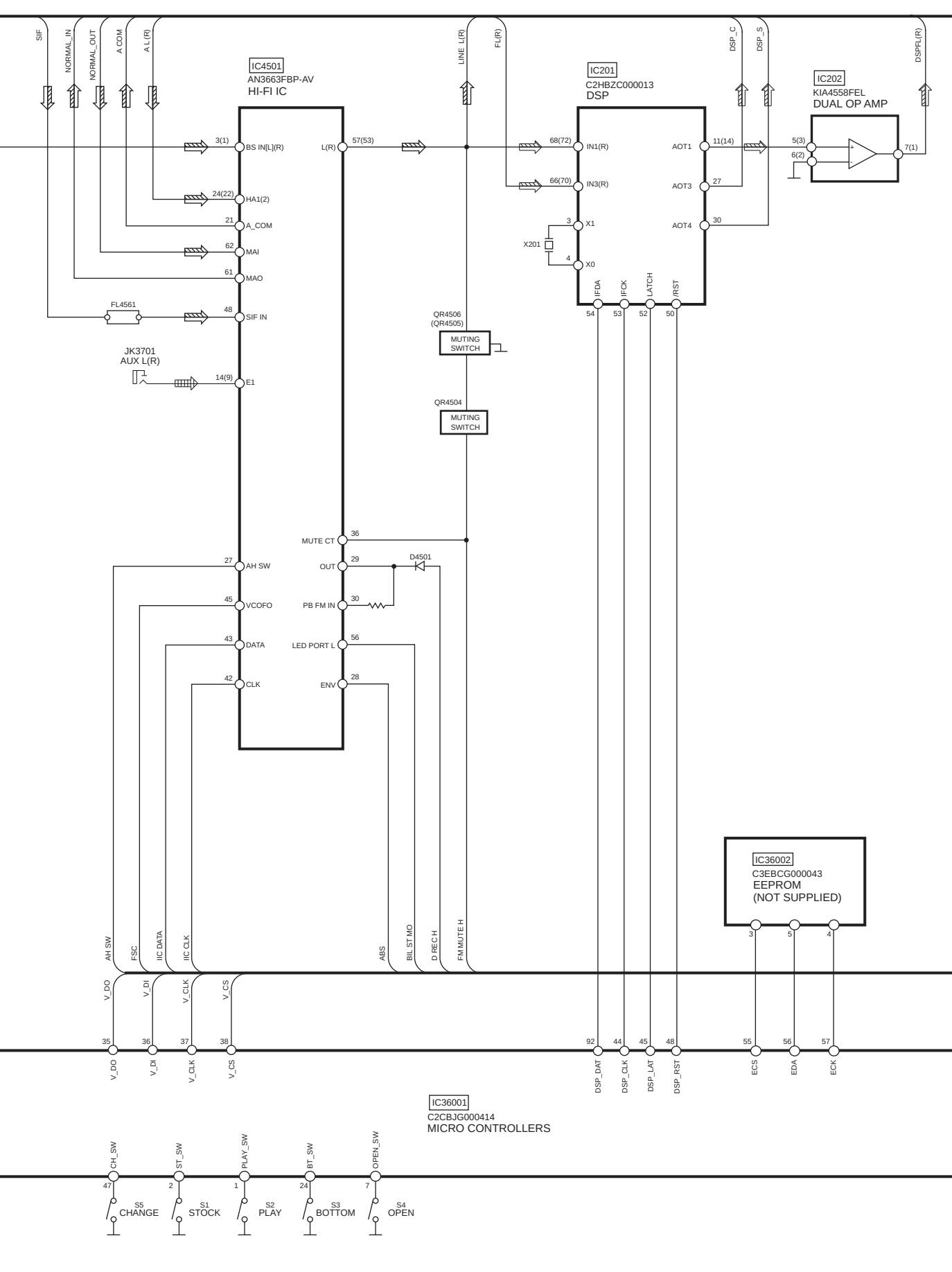
MN2DS0003APH IC8001 DV2.1

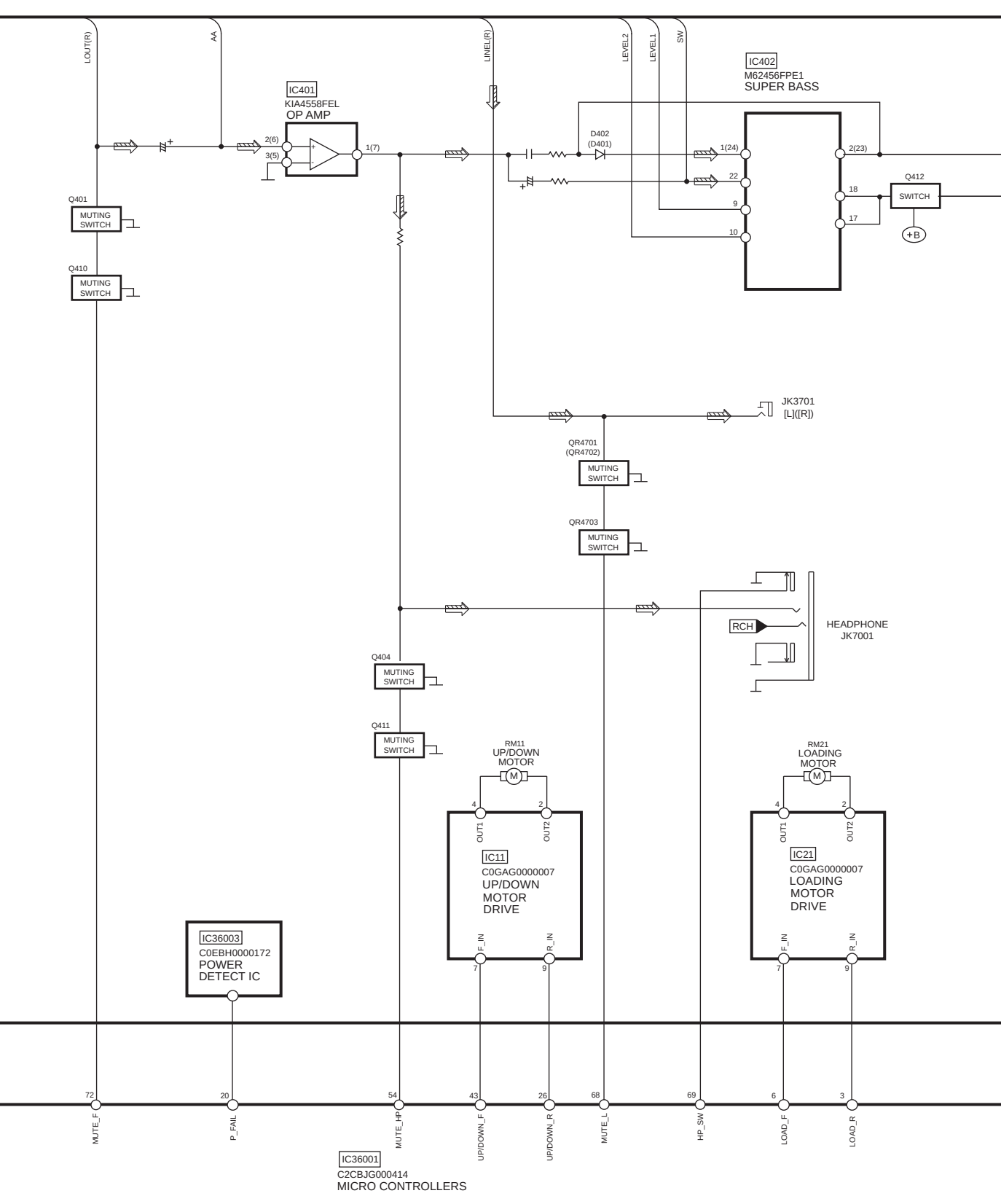


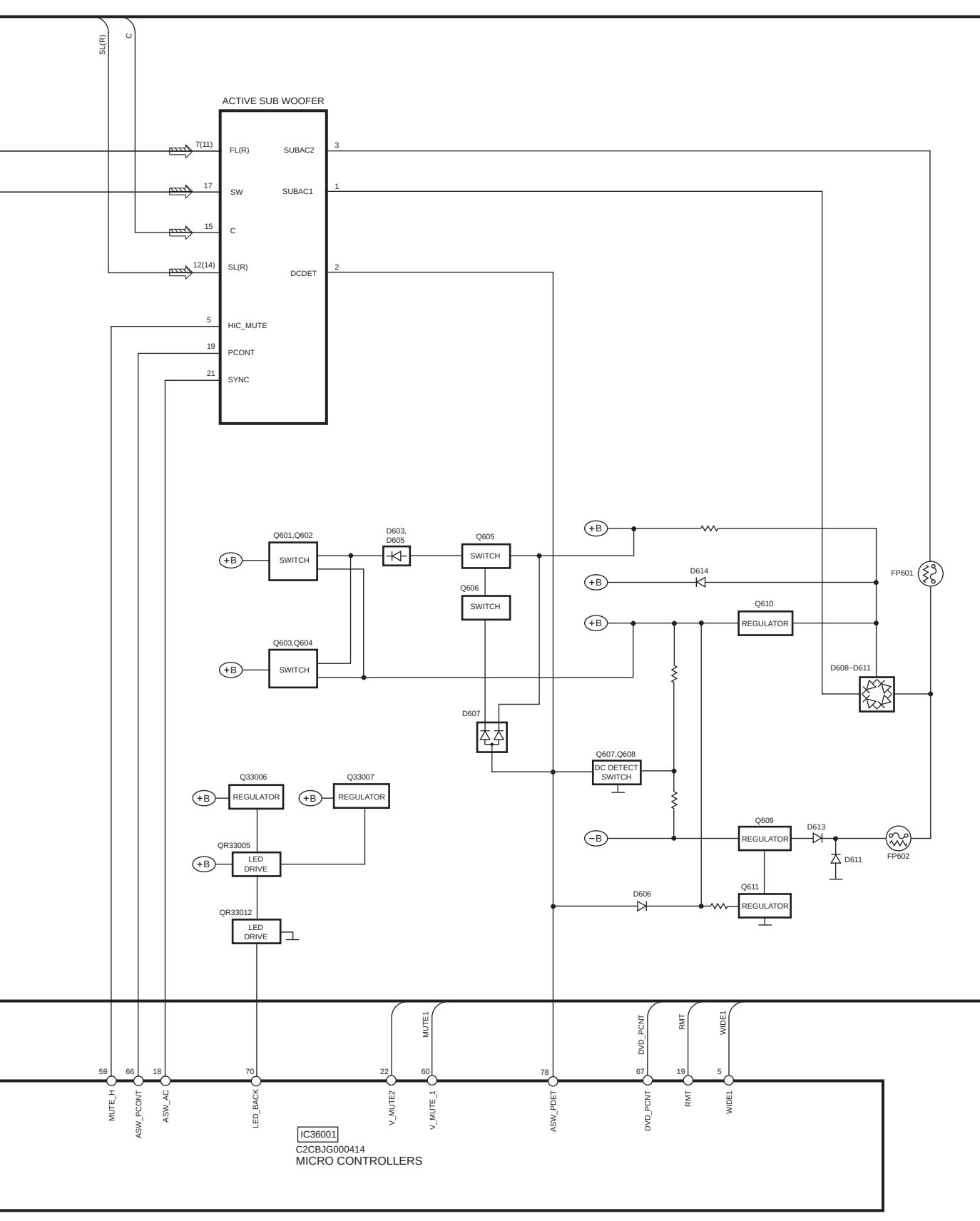
MN2DS0003APH IC8001 DV2.1


SIF
TUN_V
IIC CLK
IIC DATA
AFT
DSP_S
DSP_C
TU7601
TV
TUNER
FROM IC36001
FM/AM
TUNER
IC2601
C0JBAS000008
ANALOG SWITCH
11(2)
10(1)
12(13)
9(4)
8(3)
6(5)
MIXL(R)
IC701
KIA4558FEL
DUAL OP-AMP
5(3)
7(1)
FL(R)
SW
CNT
SL(R)
Y1
Y0
W1(Z1)
W0(Z0)
CNT
W(Z)
CONT
14(13)
15(11)
10(12)
9(13)
C
IC301
COJBAR000326
LOGIC IC
IC302
C0ABCB000040
QUAD OP-AMP
Q7702,Q7704,
Q7706,Q7708,Q7710
LED
DRIVE
+B
Q7701,
Q7703,Q7705,
Q7707,Q7709
D7701~
D7705
Q1
SENSOR
TO FM/AM TUNER PACK
Q33009
RESET
SWITCH
73,76,
77,79,80
LED_1~5
DVD_CTR
TUNER_CTR
TU_FM_DET
TU_SCL
TU_ST
TU_TUNED
TU_SDA
RESET
POS
DSPCLK
CMD
ZFLAG&AMUTE
STATUS
DVD_CK
DVD_CMD
MUTE_DVD
DVD_STA
X OUT
X IN
X36001
IC36001
C2CBJG000414
MICRO CONTROLLERS
TO
DVD BLOCK


DSP_FL(R)
LEVEL1
LEVEL2
IC303
C1BB00000782
4CH VOLUME IC
PORT2
2
17(16)
BYPASSL(R)
PORT3
3
IC501
KIA4558FEL
DUAL OP AMP
15(13)
LIN(R)
LOUT(R)
31(32)
LOUT(R)
6
SWIN
SWOUT
36
SW
11
CIN
COUT
33
C
9(8)
SLIN(R)
SLOUT(R)
34(35)
SL(R)
1
PORT1
LATCH
DATA
CLOCK
39
40
41
IC403
C0ABCB000040
QUAD OP AMP
AA
DP7201
FL DISPLAY
Q7001
FL DRIVE
FROM
POWER
TRANSFORMER
D7202
15~23,
25~50
1~4,
60~64
QR7201
SWITCH
+B
QR7202
SWITCH
SEG01
SEG35
DIG00
DIG08
IC7201
C0HBB0000039
FL DRIVER
/CS
/RESET
SCK
SDATA
Q405
MUTING
SWITCH
Q402
MUTING
SWITCH
Q403
MUTING
SWITCH
Q409
MUTING
SWITCH
Q406
MUTING
SWITCH
Q408
SWITCH
(CF ON/OFF)
Q407
MUTING
SWITCH
VR7201
VOLUME JOG
81
82
51
52
53
49
74
63
71
88
90
89
87
75
JOG A
JOG B
VOL_CS
VOL_DA
VOL_CK
MUTE_SW
MUTE_S
CF_ON/OFF
MUTE_C
FLD_CS
FLD_RST
FLD_CK
FLD_DA
FL_CONT
IC36001
C2CBJG000414
MICRO CONTROLLERS
KEY2
KEY1
91
97
KEY SW
S7001~S7003,
S7005~S7013


SIF
NORMAL_IN
NORMAL_OUT
A COM
A L(R)
IC4501
AN3663FBP-AV
HI-FI IC
LINE L(R)
FL(R)
IC201
C2HBZC000013
DSP
DSP_C
DSP_S
IC202
KIA4558FEL
DUAL OP AMP
DSPFL(R)
3(1) BS IN[L](R)
L(R) 57(53)
68(72) IN1(R)
66(70) IN3(R)
3 X1
4 X0
X201
AOT1 11(14)
AOT3 27
AOT4 30
5(3)
6(2)
7(1)
24(22) HA1(2)
21 A_COM
62 MAI
61 MAO
FL4561
48 SIF IN
IFDA 54
IFCK 53
LATCH 52
/RST 50
QR4506
(QR4505)
MUTING
SWITCH
JK3701
AUX L(R)
14(9) E1
QR4504
MUTING
SWITCH
MUTE CT 36
27 AH SW
OUT 29
D4501
45 VCOFO
PB FM IN 30
43 DATA
LED PORT L 56
42 CLK
ENV 28
IC36002
C3EBCG000043
EEPROM
(NOT SUPPLIED)
3 5 4
AH SW
FSC
IIC DATA
IIC CLK
ABS
BIL ST MO
D REC H
FM MUTE H
V_DO
V_DI
V_CLK
V_CS
35 36 37 38
92 44 45 48
55 56 57
DSP_DAT
DSP_CLK
DSP_LAT
DSP_RST
ECS
EDA
ECK
IC36001
C2CBJG000414
MICRO CONTROLLERS
CH_SW
ST_SW
PLAY_SW
BT_SW
OPEN_SW
47 2 1 24 7
S5 CHANGE
S1 STOCK
S2 PLAY
S3 BOTTOM
S4 OPEN

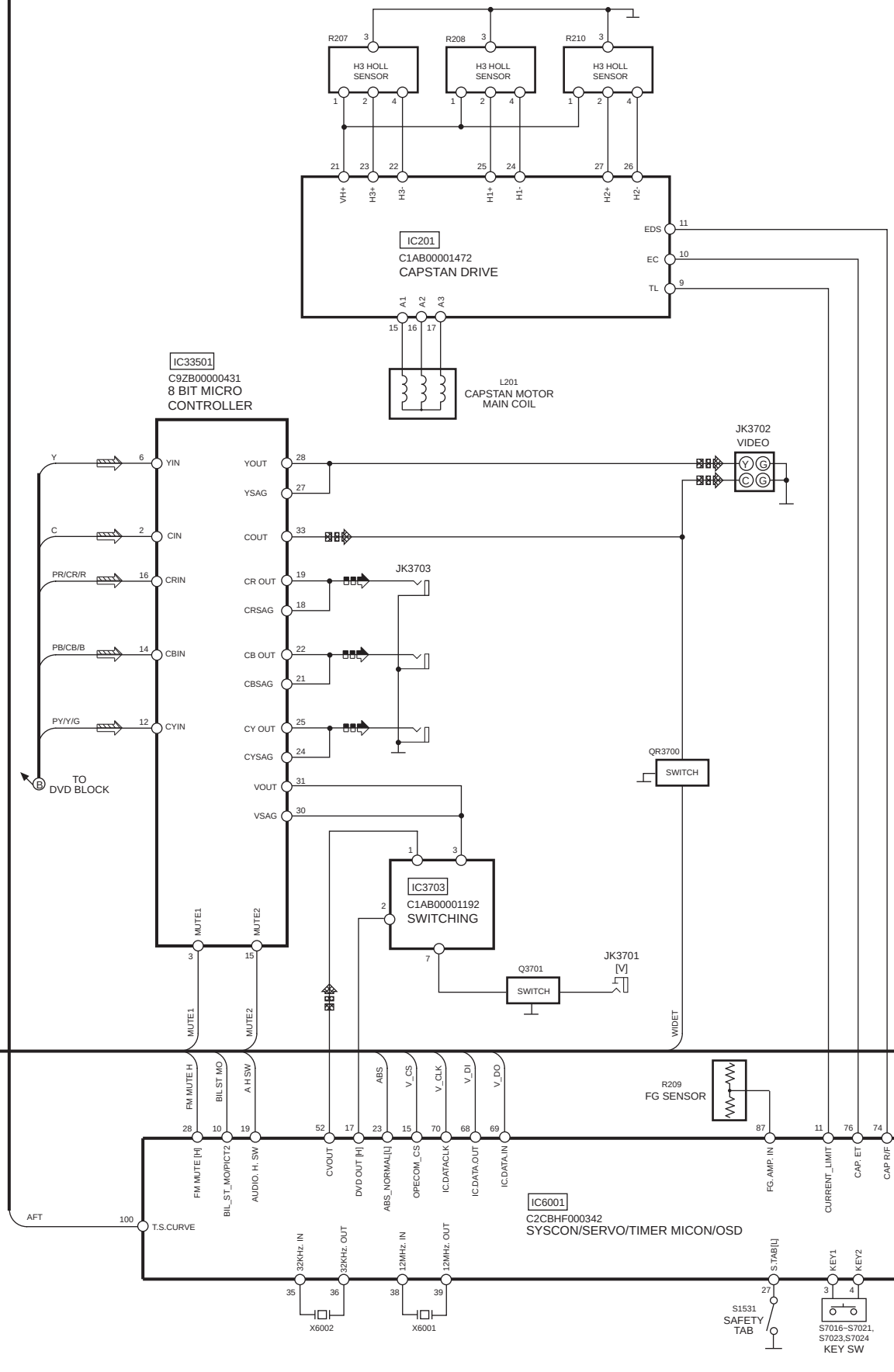

LOUT(R)
AA
LINEL(R)
LEVEL2
LEVEL1
SW
IC402
M62456FPE1
SUPER BASS
IC401
KIA4558FEL
OP AMP
2(6)
3(5)
1(7)
D402
(D401)
1(24)
22
9
10
2(23)
18
17
Q412
SWITCH
+B
Q401
MUTING
SWITCH
Q410
MUTING
SWITCH
JK3701
[L]([R])
QR4701
(QR4702)
MUTING
SWITCH
QR4703
MUTING
SWITCH
RCH
HEADPHONE
JK7001
Q404
MUTING
SWITCH
Q411
MUTING
SWITCH
RM11
UP/DOWN
MOTOR
M
4
2
OUT1
OUT2
IC11
C0GAG0000007
UP/DOWN
MOTOR
DRIVE
F_IN
R_IN
7
9
RM21
LOADING
MOTOR
IC21
C0GAG0000007
LOADING
MOTOR
DRIVE
IC36003
C0EBH0000172
POWER
DETECT IC
72
20
54
43
26
68
69
6
3
MUTE_F
P_FAIL
MUTE_HP
UP/DOWN_F
UP/DOWN_R
MUTE_L
HP_SW
LOAD_F
LOAD_R
IC36001
C2CBJG000414
MICRO CONTROLLERS

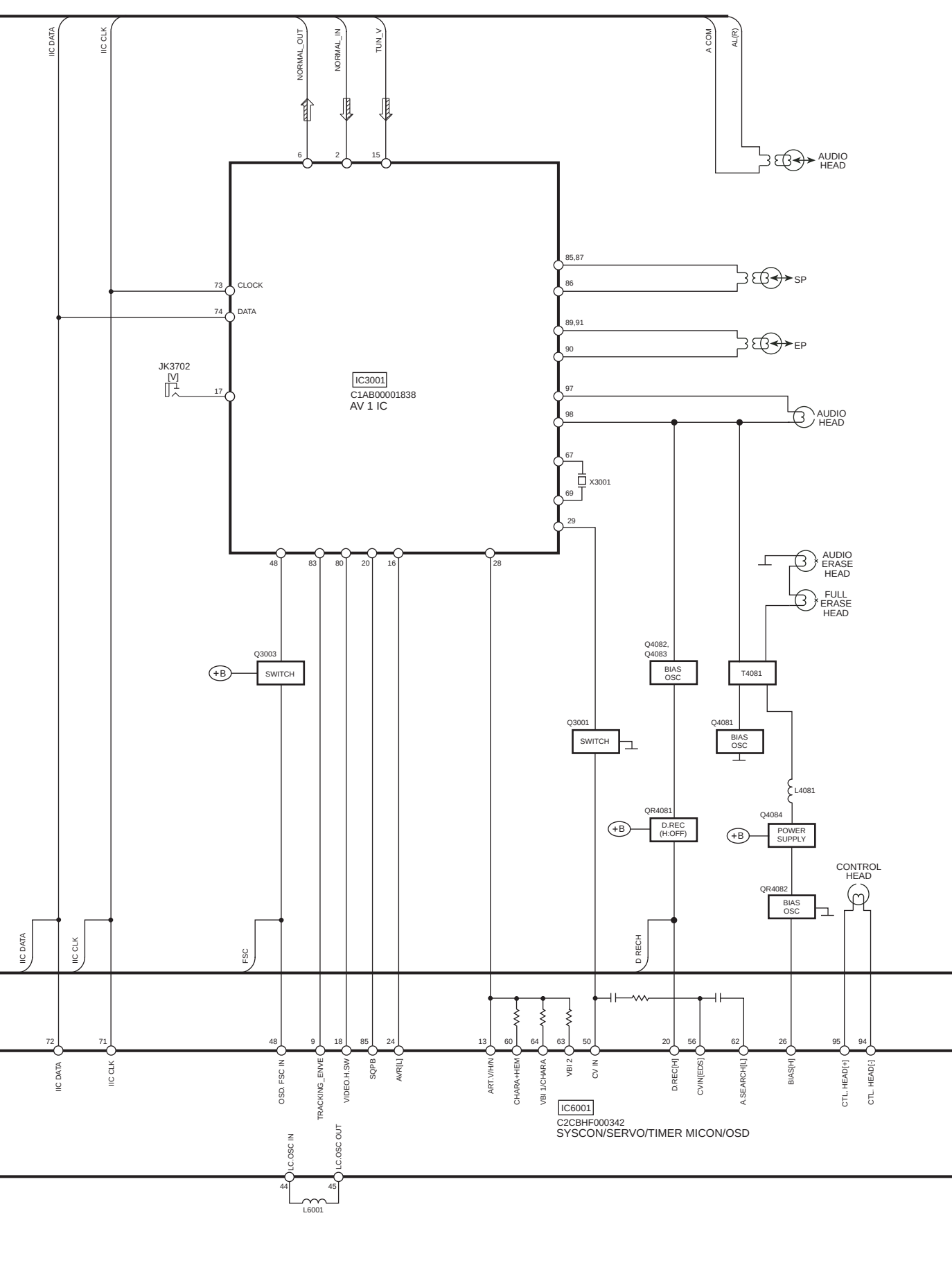


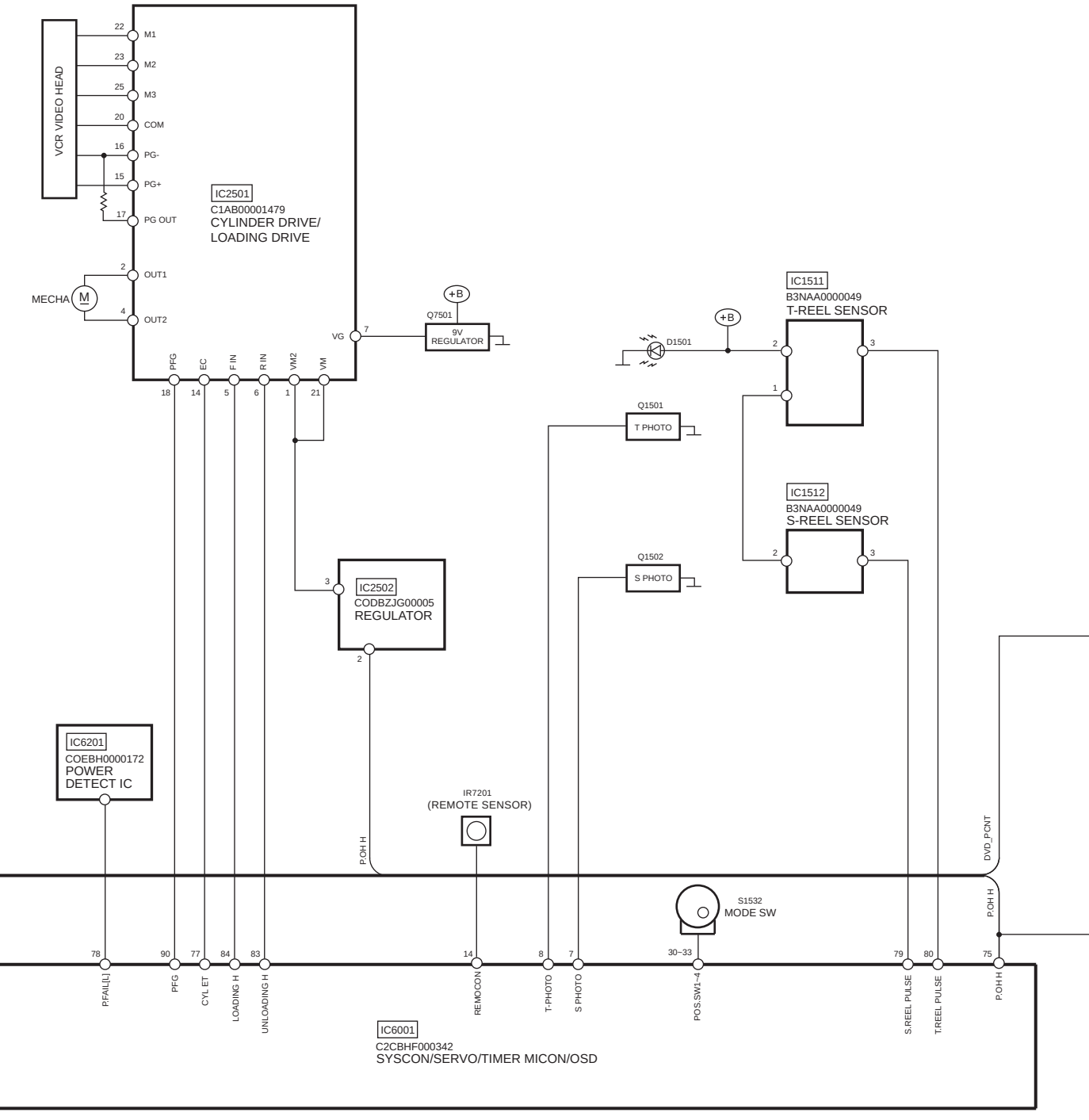
IC36001

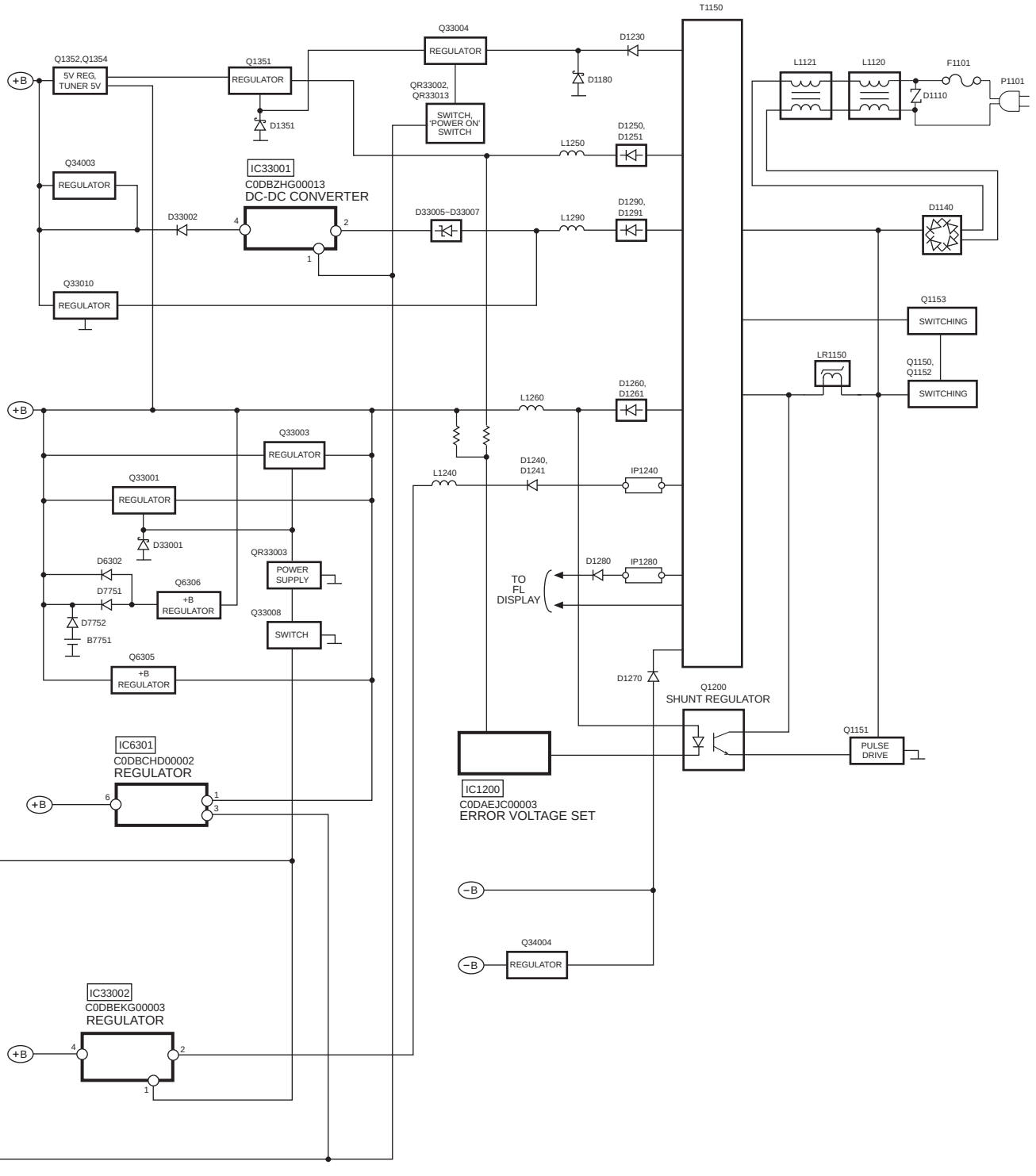
C2CBJG000414

MICRO CONTROLLERS


R207
R208
R210
H3 HOLL SENSOR
H3 HOLL SENSOR
H3 HOLL SENSOR
VH+
H3+
H3-
H1+
H1-
H2+
H2-
IC201
C1AB00001472
CAPSTAN DRIVE
EDS
EC
TL
L201
CAPSTAN MOTOR MAIN COIL
IC33501
C9ZB00000431
8 BIT MICRO CONTROLLER
JK3702
VIDEO
JK3703
QR3700
SWITCH
TO DVD BLOCK
IC3703
C1AB00001192
SWITCHING
Q3701
SWITCH
JK3701
[V]
WIDET
R209
FG SENSOR
IC6001
C2CBHF000342
SYSCON/SERVO/TIMER MICON/OSD
AFT
T.S.CURVE
X6002
X6001
S1531
SAFETY TAB
S7016~S7021, S7023,S7024
KEY SW


IIC DATA
IIC CLK
NORMAL_OUT
NORMAL_IN
TUN_V
A.COM
AL(R)
AUDIO HEAD
6
2
15
85,87
86
SP
89,91
90
EP
73 CLOCK
74 DATA
JK3702
[V]
17
IC3001
C1AB00001838
AV 1 IC
97
98
AUDIO HEAD
67
X3001
69
29
48
83
80
20
16
28
AUDIO ERASE HEAD
FULL ERASE HEAD
Q3003
+B
SWITCH
Q4082, Q4083
BIAS OSC
T4081
Q3001
SWITCH
Q4081
BIAS OSC
L4081
QR4081
+B
D.REC (H:OFF)
Q4084
+B
POWER SUPPLY
CONTROL HEAD
QR4082
BIAS OSC
IIC DATA
IIC CLK
FSC
D.RECH
72
71
48
9
18
85
24
13
60
64
63
50
20
56
62
26
95
94
IIC DATA
IIC CLK
OSD. FSC IN
TRACKING_ENVE
VIDEO.H.SW
SQPB
AVR[L]
ART.V/H/N
CHARA+HEM
VBI 1/CHARA
VBI 2
CV IN
D.REC[H]
CVIN[EDS]
A.SEARCH[L]
BIAS[H]
CTL. HEAD[+]
CTL. HEAD[-]
IC6001
C2CBHF000342
SYSCON/SERVO/TIMER MICON/OSD
LC.OSC IN
LC.OSC OUT
44
45
L6001


VCR VIDEO HEAD
22 M1
23 M2
25 M3
20 COM
16 PG-
15 PG+
17 PG OUT
IC2501
C1AB00001479
CYLINDER DRIVE/
LOADING DRIVE
2 OUT1
MECHA M
4 OUT2
VG 7
+B
Q7501
9V
REGULATOR
PFG 18
EC 14
F IN 5
R IN 6
VM2 1
VM 21
IC1511
B3NAAA0000049
T-REEL SENSOR
+B
D1501
2
3
1
Q1501
T PHOTO
IC1512
B3NAAA0000049
S-REEL SENSOR
Q1502
S PHOTO
2
3
3
IC2502
CODBZJG00005
REGULATOR
2
IC6201
COEBH0000172
POWER
DETECT IC
IR7201
(REMOTE SENSOR)
P.OH H
DVD_PCNT
P.OH H
S1532
MODE SW
78
90
77
84
83
14
8
7
30~33
79
80
75
P.FAIL[L]
PFG
CYL ET
LOADING H
UNLOADING H
REMOCON
T-PHOTO
S PHOTO
POS.SW1~4
S.REEL PULSE
T.REEL PULSE
P.OH H
IC6001
C2CBHF000342
SYSCON/SERVO/TIMER MICON/OSD



SIGNAL LINES

: MAIN SIGNAL LINE	: DVD AUDIO SIGNAL LINE	: PLAYBACK SIGNAL LINE
: DVD (AUDIO /VIDEO) SIGNAL LINE	: DVD VIDEO SIGNAL LINE	: RECORD SIGNAL LINE
: AUX SIGNAL LINE	: VIDEO SIGNAL LINE	: FM/AM SIGNAL LINE
: CD/DA SIGNAL LINE		

( ) Indicates the Pin No. of Right Channel.

NOTE : Signal Lines are applicable to the Left Channel only.

DSP P.C.B (VEPV0002A) (SIDE A)

Ref No.	IC201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	4.9	2.0	-	0	0	0	-	2.5	0	2.5	0	5.1	2.5	2.5	0	2.5	0	0	2.5
VIDEO RCD																				

Ref No.	IC201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	2.5	-	2.4	0	2.5	2.5	2.5	5.1	0	2.5	0	2.5	2.5	0	0	0	5.1	0	0	2.5
VIDEO RCD																				

Ref No.	IC201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	2.5	0	0	0	0	0	0	0	5.1	5.2	0	5.2	0	0	0	0	0	0	0	0
VIDEO RCD																				

Ref No.	IC201																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	0	0	0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0	0	2.5	2.5	5.1	5.1	2.5	2.5
VIDEO RCD																				

Ref No.	IC202																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-7.6	0	0	0	7.7												
VIDEO RCD																				

Ref No.	IC301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	2.2	-	-	-	0	0	-7.6	0	0	0	0	2.2	0	0	0	5.2				
VIDEO RCD																				

Ref No.	IC302																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	0	0	7.7	0	0	0	0	0	0	-7.6	0	0	0						
VIDEO RCD																				

Ref No.	IC303																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	5.1	5.1	-	7.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VIDEO RCD																				

Ref No.	IC303																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	0	0	0	0	0	-7.6	0	0	0	0	0	0	0	0	0	0
VIDEO RCD																				

Ref No.	IC303																			
MODE	41	42																		
CD PLAY	0	5.2																		
VIDEO RCD																				

Ref No.	IC401																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-7.6	0	0	0	7.7												
VIDEO RCD																				

Ref No.	IC402																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	7.0	7.7	0	-1.1	0	0	0	0	-0.2	0.1	-	0	0	0	0	0	-7.6
VIDEO RCD																				

Ref No.	IC402																			
MODE	21	22	23	24																
CD PLAY	0	0	0	0																
VIDEO RCD																				

Ref No.	IC403																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	0	0	7.7	0	0	0	0	0	0	-7.6	0	0	0						
VIDEO RCD																				

Ref No.	IC501																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-7.6	0	0	-0.1	7.7												
VIDEO RCD																				

Ref No.	IC701																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	7.4	0	0	0	7.1												
VIDEO RCD																				

POWER P.C.B (VEPV0004A)

Ref No.	IC1200																			
MODE	1	2	3																	
CD PLAY	0	0	4.5																	
VIDEO RCD																				

MAIN P.C.B (VEPV0001A)

Ref No.	IC1511																			
MODE	1	2	3	4																
CD PLAY	1.2	0	5.2	2.4																
VIDEO RCD	1.2	0	5.2	2.4																
Ref No.	IC1512																			
MODE	1	2	3	4																
CD PLAY	0	1.2	0	5.2																
VIDEO RCD	0	0	1.2	5.2																
Ref No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	12.4	2.0	0	0.8	0	0	16.4	0	2.8	1.6	1.7	0.7	1.5	2.5	2.6	2.6	2.6	1.4	5.2	3.7
VIDEO RCD	12.4	0.2	0	0.2	0	0	16.4	0	2.9	1.6	1.6	0.4	0.9	2.6	2.6	2.6	2.6	1.4	5.2	3.2
Ref No.	IC2501																			
MODE	21	22	23	24	25	26	27													
CD PLAY	12.4	3.7	3.6	0.1	3.7	0	0													
VIDEO RCD	12.4	3.2	3.2	0.1	3.1	0	0													
Ref No.	IC2502																			
MODE	1	2	3	4	5															
CD PLAY	16.3	5.1	12.4	-	0															
VIDEO RCD	16.4	5.1	12.4	-	0															
Ref No.	IC2601																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	0	0	0	0.3	0.3	-2.1	0	0	0	0	0	0	5.8						
VIDEO RCD	0	0	0	0	0.3	0.3	-2.1	0	0	0	0	0	0	5.8						
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	5.2	2.1	2.7	2.9	1.5	1.4	1.5	1.9	0.7	0	2.4	2.9	2.1	2.9	2.0	2.9	4.3
VIDEO RCD	0	0	0	5.2	2.1	2.6	2.9	2.0	1.9	1.9	2.7	1.8	0	2.8	2.8	2.0	2.8	2.0	2.8	0
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	2.9	5.1	2.4	0.7	0	2.8	0.7	0	2.1	3.0	0.4	2.3	2.1	2.2	3.0	2.4	3.0	2.2	1.5	2.2
VIDEO RCD	2.8	5.1	2.4	0.6	0	3.0	0.6	0	2.3	2.9	0.4	2.3	2.1	1.9	3.1	2.3	3.0	2.2	1.5	2.1
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	2.8	2.0	2.2	0	3.3	3.3	5.2	5.1	3.6	5.2	2.2	5.2	2.7	0	2.1	0	2.2	2.1	5.1	5.1
VIDEO RCD	2.7	2.0	2.2	0	3.3	3.3	5.1	5.1	3.2	5.1	2.0	5.1	2.7	0	2.0	0	2.2	2.0	5.1	5.1
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0.1	1.4	2.3	2.5	2.3	2.5	2.2	2.5	2.0	1.0	0.8	5.1	5.4	5.4	2.8	2.2	2.9	0	0	2.7
VIDEO RCD	0	2.2	2.3	2.7	2.3	2.7	2.2	2.5	2.0	2.8	0.6	5.1	4.2	3.9	2.8	2.3	2.9	0	0	2.6
Ref No.	IC3001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0.7	0	0.2	5.1	2.3	2.3	2.3	0	2.3	2.3	2.3	5.2	2.6	2.6	2.6	1.3	2.6	2.6	0	2.6
VIDEO RCD	0.7	0	3.4	5.1	2.4	2.5	2.4	0	0	0	0	5.2	2.6	2.6	2.6	2.6	2.6	2.4	0	2.6
Ref No.	IC3703																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	2.4	0	1.8	0	1.9	5.2	1.7	0												
VIDEO RCD	2.4	0	1.9	0	2.0	5.2	1.7	0												
Ref No.	IC4501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	0	2.5	0	2.4	2.6	2.1	0.4	0	0	0	2.1	2.7	0	0	2.6	0.5	2.6	2.6	0
VIDEO RCD	2.4	0	2.4	0	2.4	2.6	2.0	0.4	0	0	0	2.0	2.7	0	0	2.7	0.6	2.6	2.6	2.1
Ref No.	IC4501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0.7	0	0.7	5.3	0	4.4	0.1	2.0	1.8	3.1	2.6	2.6	0.5	2.6	5.1	1.7	0	0.1	5.3
VIDEO RCD	2.1	2.2	0	2.2	5.2	2.1	0	4.4	4.3	4.1	1.0	2.6	2.6	0.7	2.6	0.1	1.7	0	0.1	5.2
Ref No.	IC4501																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	5.4	5.4	2.4	0	3.7	2.3	2.2	3.7	3.7	5.3	3.7	6.3	2.6	0	0	6.3	12.5	6.3	0
VIDEO RCD	0	4.2	3.9	2.4	0	3.7	1.4	2.2	3.7	3.6	5.2	3.6	6.2	2.5	0	0	6.2	12.4	6.2	0.6
Ref No.	IC4501																			
MODE	61	62	63	64																
CD PLAY	2.6	2.5	2.7	0.5																
VIDEO RCD	2.6	2.4	2.7	0.5																
Ref No.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	5.3	5.3	0	0	5.1	4.1	0.2	0	5.0	0	0	1.0	3.4	0	0	2.6	2.6	0
VIDEO RCD	0	0	5.3	5.3	0	0	5.1	4.3	3.3	0	5.0	0	0	0.4	3.4	0	0	2.6	0	5.2
Ref No.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	5.3	0	0.1	2.0	0	0	0	5.1	0	0	5.2	5.2	0	5.2	1.3	1.2	5.2	2.1	2.1	0
VIDEO RCD	5.3	0	4.4	2.0	0	5.2	0	0.1	0	0	5.2	5.2	0	5.2	1.3	1.2	5.2	-	-	0
Ref No.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	5.0	5.0	0	1.3	2.4	0	1.5	1.0	1.6	5.2	2.8	1.5	1.7	0	0	0	0
VIDEO RCD	0	0	0	5.1	5.1	0	1.3	2.3	0	1.7	0.3	1.6	5.2	2.3	1.6	1.7	0	0	0	0
Ref No.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	0.6	0	0	0	0	0	5.3	0.3	5.3	5.3	5.3	2.6	0	5.1	0	3.3	5.2	5.2	5.2
VIDEO RCD	0	0.6	0	0	0	0	0	5.3	0.3	5.3	5.3	5.3	2.6	0	5.1	2.6	2.8	5.2	0.2	0.2
Ref No.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	0	0	4.3	2.6	2.6	0	0.8	0	2.6	2.6	0	2.6	2.6	2.6	2.6	5.2	5.3	4.5
VIDEO RCD	0	0	0	0	0	2.6	2.6	0	0.6	1.4	2.6	2.6	0	2.4	2.9	2.6	2.6	5.2	5.3	4.6

MAIN P.C.B (VEPV0001A)

Ref No.	IC6201																			
MODE	1	2	3	4	5															
CD PLAY	5.2	5.2	0	-	-															
VIDEO RCD	5.2	5.2	0	-	-															
Ref No.	IC6301																			
MODE	1	2	3	4	5	6														
CD PLAY	6.0	0	5.1	1.3	0	5.2														
VIDEO RCD	6.0	0	5.0	1.3	0	5.2														
VIDEO RCD																				
Ref No.	IC33001																			
MODE	1	2	3	4	5															
CD PLAY	5.1	11.3	0	9.8	9.2															
VIDEO RCD	5.1	11.4	0	9.8	9.2															
Ref No.	IC33002																			
MODE	1	2	3	4	5															
CD PLAY	0	3.1	0	3.1	3.0															
VIDEO RCD	0	3.2	0	3.2	3.0															
Ref No.	IC33501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	0	0	0	0	0
VIDEO RCD	0	0	0	0	0	0	0	0	0	0	-	0	0	-	0	0	0	0	0	0
Ref No.	IC33501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34						
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
VIDEO RCD	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Ref No.	IC36001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	5.2	5.2	5.1	0	0	5.1	5.2	0	0	0	0	5.1	2.7	0	2.5	5.2	5.2	5.2	0.9	5.1
VIDEO RCD	5.2	5.2	5.1	0	0	5.1	5.2	0	0	0	0	5.1	2.7	0	2.4	5.2	5.2	5.1	0.8	5.1
Ref No.	IC36001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	5.1	5.1	5.1	0	0.9	5.1	0	0	0	0.9	1.7	0	0	4.8	4.8	2.0	0	0
VIDEO RCD	0	0	5.2	5.2	5.2	5.1	0.7	5.2	5.2	5.2	0	0.7	0.6	0	0	4.8	4.8	2.1	0	0
Ref No.	IC36001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	0	0.8	5.1	0	0	5.1	0	0	0	0	0	0	0	0	0	0
VIDEO RCD	0	0	5.1	0	4.9	5.2	5.1	5.1	5.0	5.1	0	0	0	5.0	0	0	0	0	0	0
Ref No.	IC36001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	5.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0
VIDEO RCD	0	5.1	5.1	0	5.1	0	0	0	0	5.1	5.0	5.0	0	5.0	5.1	0	0	1.1	0	5.1
Ref No.	IC36001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	5.1	0.1	0	0	0	0	0	0	0	5.2	5.1	0	0.4	0	0	0	5.1	5.1	5.2	0
VIDEO RCD	0.1	0.1	0	0	0	0	3.1	3.6	4.3	5.1	5.2	0	0.4	0	0	0	5.2	5.2	5.1	0
Ref No.	IC36003																			
MODE	1	2	3	4	5															
CD PLAY	5.2	5.2	0	-	-															
VIDEO RCD	5.1	5.1	0	-	-															

PANEL B P.C.B (VEPV0006A)

Ref No.	IC7201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-24.9	-24.9	-24.9	-24.9	5.1	3.6	4.3	3.0	0	0	5.1	2.2	2.2	0	-24.8	-28.1	-28.1	-24.8	-28.1	-24.9
VIDEO RCD	-24.8	-24.8	-24.8	-24.8	5.1	3.6	4.3	3.1	0	0	5.1	2.2	2.2	0	-24.7	-28.0	-28.0	-24.8	-28.0	-24.8
Ref No.	IC7201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-24.9	-24.8	-11.8	-28.5	-24.9	-24.9	-25.5	-25.5	-25.5	-24.8	-18.9	-18.9	-15.7	-11.8	-18.4	-18.4	-21.6	-15.2	-18.9	-18.0
VIDEO RCD	-24.7	-21.6	-21.6	-28.4	-28.0	-28.0	-28.6	-28.6	-28.6	-24.7	-18.8	-25.4	-18.9	-15.0	-24.9	-15.1	-24.8	-18.4	-18.9	-18.0
Ref No.	IC7201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	-18.9	-18.9	-25.5	-22.2	-25.5	-25.5	-25.4	-25.5	-21.7	-15.2	-28.1	5.1	-28.1	-28.1	-28.1	-28.1	-28.1	-28.1	-28.1	-24.9
VIDEO RCD	-18.9	-18.9	-25.4	-22.1	-25.4	-28.6	-28.6	-25.4	-18.4	-18.3	-28.0	5.1	-28.0	-28.0	-28.0	-28.0	-28.0	-28.0	-28.0	-24.7
Ref No.	IC7201																			
MODE	61	62	63	64																
CD PLAY	-24.9	-24.9	-24.9	-24.9																
VIDEO RCD	-24.7	-24.8	-24.8	-24.8																

DSP P.C.B (VEPV0002A) (SIDE A)

Ref No.	Q401							Q402							Q403					
MODE	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
CD PLAY	0	-5.1	0	0	-5.1	0		0	0.7	0	0	0.7	0		0	0.6	0	0	-5.1	0
VIDEO RCD																				
Ref No.	Q404							Q405				Q406								
MODE	1	2	3	4	5	6		E	C	B		E	C	B						
CD PLAY	0	-5.1	0	0	-5.1	0		0	0	-5.1		0	-5.1	0						
VIDEO RCD																				
Ref No.	Q407				Q408			Q409				Q410				Q411				
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B		
CD PLAY	0	-5.1	0		0.7	0.7	0	0	-5.1	0		0	-5.1	0		0	-5.1	0		
VIDEO RCD																				
Ref No.	Q412				Q601			Q602				Q603				Q604				
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B		
CD PLAY	0.5	0.6	0		11.6	5.1	10.9	4.3	11.1	4.9		11.7	5.1	11.1		4.3	11.1	4.8		
VIDEO RCD																				
Ref No.	Q605				Q606			Q607				Q608				Q609				
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B		
CD PLAY	13.5	0	13.2		0	5.2	0	0	5.2	0.1		0.1	5.2	0		-7.6	-14.2	-8.2		
VIDEO RCD																				
	Q610				Q611															
MODE	E	C	B		E	C	B													
CD PLAY	7.8	14.2	8.3		0	-8.2	-0.6													
VIDEO RCD																				

POWER P.C.B (VEPV0004A)

Ref No.	Q1150				Q1151			Q1152				Q1153				Q1200			
MODE	S	D	G		E	C	B	E	C	B		S	D	G		1	2	3	4
CD PLAY	-30.8	73.7	-27.7		-30.7	-27.7	-30.5	-30.8	-27.8	-30.8		55.5	79.5	56.2		6.3	5.1	-30.0	-21.4
VIDEO RCD																			

MAIN P.C.B (VEPV0001A)

Ref No.	Q1351				Q1352			Q1354				Q1501			Q1502				
MODE	E	C	B		E	C	B	E	C	B		+	-		+	-			
CD PLAY	5.2	6.1	6.0		5.3	6.1	6.0	5.2	6.1	6.0		5.2	0		5.1	0			
VIDEO RCD	5.2	6.1	6.0		5.2	6.1	6.0	5.2	6.1	6.0		5.2	0		5.1	0			
Ref No.	Q3001				Q3003			Q3701				Q4081				Q4082			
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B	
CD PLAY	1.4	5.2	2.1		2.3	5.1	1.6	2.4	0	1.7		0	0.1	0.1		0	0	0.8	
VIDEO RCD	1.6	5.2	2.2		1.6	5.1	2.3	2.4	0	1.7		0.2	4.5	0.7		-17.6	0.2	-26.0	
Ref No.	Q4083				Q4084			Q6305				Q6306				Q7501			
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.8		6.0	0.1	6.0	5.2	6.1	6.0		5.6	6.1	6.2		8.8	16.5	9.4	
VIDEO RCD	0.2	0	-25.8		6.0	5.9	5.3	5.2	6.1	6.1		5.5	6.1	6.2		8.8	16.4	9.4	
Ref No.	Q33001				Q33003			Q33004				Q33006				Q33007			
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B	
CD PLAY	0	6.2	0		5.1	6.2	0	12.4	16.6	13.1		5.5	6.1	6.2		5.5	6.1	6.2	
VIDEO RCD	0.1	6.2	0		4.8	6.2	0	12.4	16.5	13.1		5.5	6.1	6.2		5.8	6.1	6.2	
Ref No.	Q33008				Q33009			Q33010				Q34003				Q34004			
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B	
CD PLAY	0	9.5	0		0	5.1	0	7.9	13.4	8.3		7.1	9.6	7.8		-7.4	-19.8	-8.0	
VIDEO RCD	0	9.5	0		0	5.1	0	7.9	13.5	8.2		7.1	9.6	7.8		-7.4	-20.1	-8.0	
Ref No.	QR3700				QR4081			QR4082				QR4504				QR4505			
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.2	0		5.3	5.2	0	0	6.0	0		5.1	5.0	0		0	0	5.0	
VIDEO RCD	0	5.2	0		5.2	-25.9	5.2	0	0.1	5.2		0.1	-0.5	0		0	0	-0.5	
Ref No.	QR4506				QR4701			QR4702				QR4703				QR33002			
MODE	E	C	B		E	C	B	E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	5.0		-0.6	0	0	0	0	-0.6		0	-0.6	0		36.6	37.0	0.1	
VIDEO RCD	0	0	-0.4		0	0	-0.4	0	0	-0.4		0	-0.4	0		37.0	36.8	0.1	
Ref No.	QR33003				QR33005			QR33012				QR33013							
MODE	E	C	B		E	C	B	E	C	B		E	C	B					
CD PLAY	9.6	0	9.5		16.6	16.5	0	0	0	5.2		0	0.1	5.1					
VIDEO RCD	9.6	0	9.5		16.5	16.4	0	0	0	5.1		0	0.1	5.1					

PANEL B P.C.B (VEPV0006A)

Ref No.	Q7001				QR7201			QR7202											
MODE	E	C	B		E	C	B	E	C	B									
CD PLAY	-20.0	-19.9	-19.3		5.1	5.0	0	0	0	5.1									
VIDEO RCD	-20.0	-19.9	-19.2		5.1	5.0	0	0	0	5.1									

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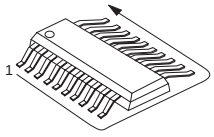

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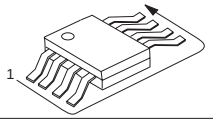

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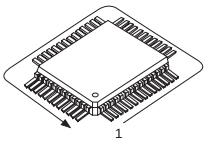

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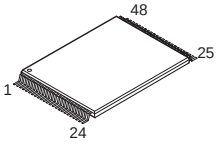

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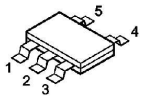

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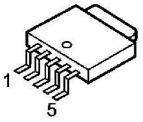

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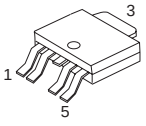

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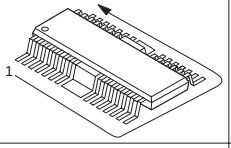

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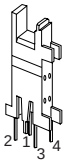

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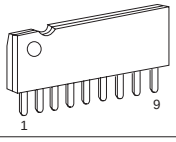

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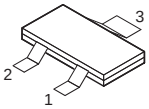

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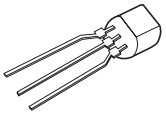

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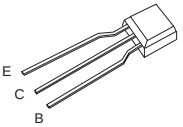

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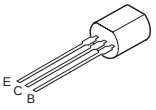

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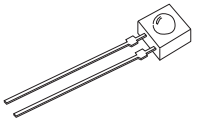

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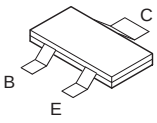

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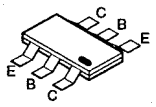

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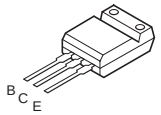

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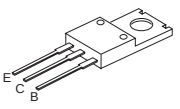

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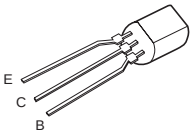

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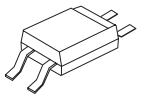

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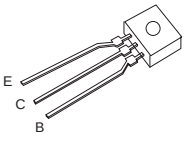

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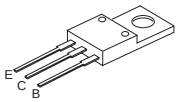

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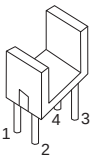

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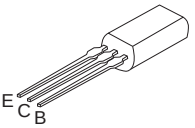

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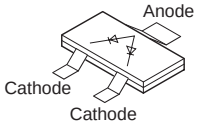

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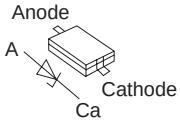

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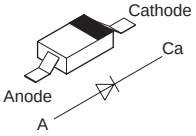

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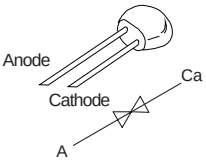

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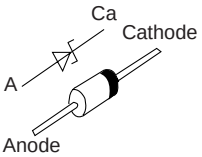

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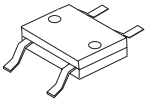

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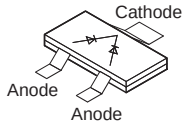

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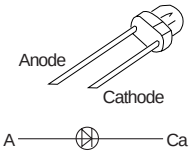

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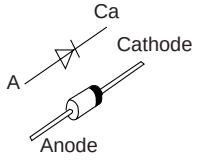

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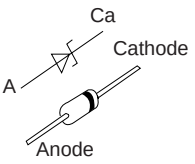

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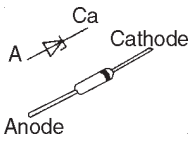

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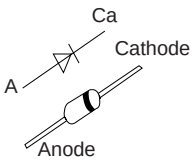

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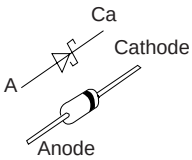

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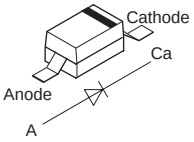

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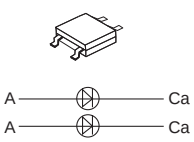


Disc	Logo	Indication in these operating instructions	Remarks	
DVD-RAM	DVD RAM RAM4.7	RAM	Recorded using Version 1.1 of the Video Recording Format (a unified video recording standard).	● Recorded with DVD video recorders, DVD video cameras, personal computers, etc. ● Remove discs from their cartridges before use.
		JPEG	Recorded using the DCF (Design rule for Camera File system) standard.	● Recorded with Panasonic DVD-Video recorders ● To play JPEG files, select “Play as Data Disc” in Other Menu (➜ page 29).
DVD-Audio	DVD AUDIO	DVD-A	—	
		DVD-V	Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select “Play as DVD-Video” in Other Menu (➜ page 29).	
DVD-Video	DVD VIDEO DVD VIDEO	DVD-V	—	
DVD-R	DVD R R4.7		Panasonic DVD-R recorded and finalized※ on a Panasonic DVD-Video recorders or DVD-Video cameras are played as DVD-Video on this unit.	
Video CD	COMPACT disc DIGITAL VIDEO	VCD	—	
SVCD	COMPACT disc SUPER VIDEO		Conforming to IEC62107	
CD	COMPACT disc DIGITAL AUDIO COMPACT disc DIGITAL AUDIO TEXT	CD	This unit is compatible with HDCD, but does not support the Peak Extend function. (A function which expands the dynamic range of high level signals) HDCD-encoded CDs sound better because they are encoded with 20 bits, as compared with 16 bits for all other CDs. ● During HDCD play, “HDCD” lights on the unit’s display.	
CD-R CD-RW	—	WMA MP3 JPEG CD VCD	● This unit can play CD-R/RW (audio recording disc) recorded with the formats on the left. Close the sessions or finalize※ the disc after recording. ● **HighMAT discs** WMA, MP3 or JPEG files only. To play without using the HighMAT function, select “Play as Data Disc” in Other Menu (➜ page 29).	

※A process that allows play on compatible equipment.

● It may not be possible to play the above discs in all cases due to the type of disc or condition of the recording.

■ Discs that cannot be played

PAL discs (except DVD-Audio), DVD-ROM, CD-ROM, CDV, CD-G, DVD+R, +RW, DVD-RW, SACD, Divx Video Discs and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB DVD-RAM, and “Chaoji VCD” available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

■ Audio format of DVDs

This unit automatically recognizes and decodes discs with these symbols.

DOLBY DIGITAL

DIGITAL dts SURROUND

HIGH MAT AUDIO·IMAGE

HighMAT™ and the HighMAT logo are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

HDCD®, HDCD®, High Definition Compatible Digital® and Pacific Microsonics™ are either registered trademarks or trademarks of Pacific Microsonics, Inc. in the United States and/or other countries.

HDCD system manufactured under license from Pacific Microsonics, Inc. This product is covered by one or more of the following: In the USA : 5,479,168, 5,638,074, 5,640,161, 5,808,574, 5,838,274, 5,854,600, 5,864,311, 5,872,531, and in Australia: 669114, with other patents pending.

Disc handling

■ To prevent damage

Do not;

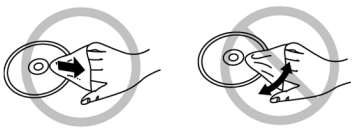
● load more than one disc per tray.

● close the drawer by hand.

■ To clean discs

DVD-A DVD-V VCD CD

Wipe with a damp cloth and then wipe dry.



RAM DVD-R

● Clean with an optional DVD-RAM/PD disc cleaner (LF-K200DCA1, where available).

● Never use cloths or cleaners for CDs etc.

■ Handling precautions

● Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).

● Do not write on the label side with a ball-point pen or other writing instrument.

● Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.

● Do not use scratch-proof protectors or covers.

● Do not use the following discs:

–Discs with exposed adhesive from removed stickers or labels (rented discs etc).

–Discs that are badly warped or cracked.

–Irregularly shaped discs, such as heart shapes.

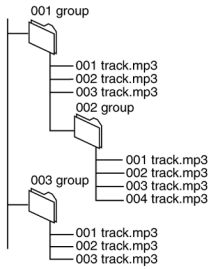
Tips for making WMA/MP3 and JPEG discs (For CD-R/CD-RW)

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit is compatible with multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

Naming folders and files

At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).
Files must have the extension:
".WMA" or ".wma"
".MP3" or ".mp3"
".JPG", ".jpg", ".JPEG" or ".jpeg"

e.g. MP3



WMA

- You cannot play WMA files that are copy protected.

MP3

- This unit is not compatible with ID3 tags.
- Compatible sampling rate: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz.

JPEG

- To view JPEG files on this unit:
  - Take them on a digital camera that meets the DCF Standard (Design rule for Camera File system) Version 1.0. Some digital cameras have functions that are not supported by the DCF Standard Version 1.0 like automatic picture rotation which may render a picture unviewable.
  - Do not alter the files in any way or save them under a different name.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF) or play associated sound.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

Designed for Windows Media™

MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

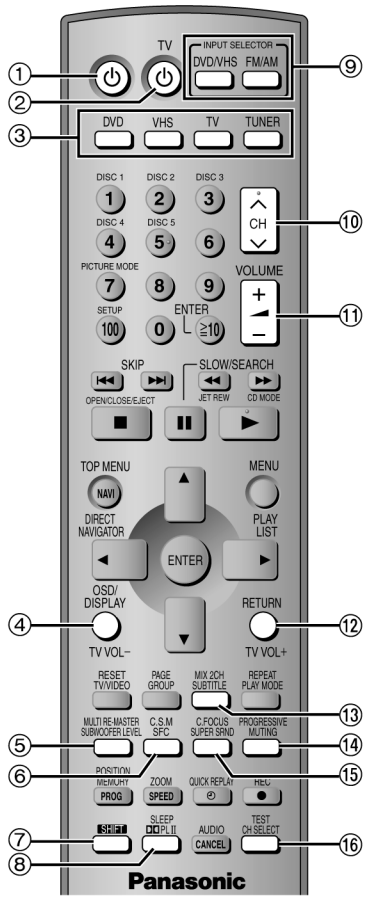
"DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

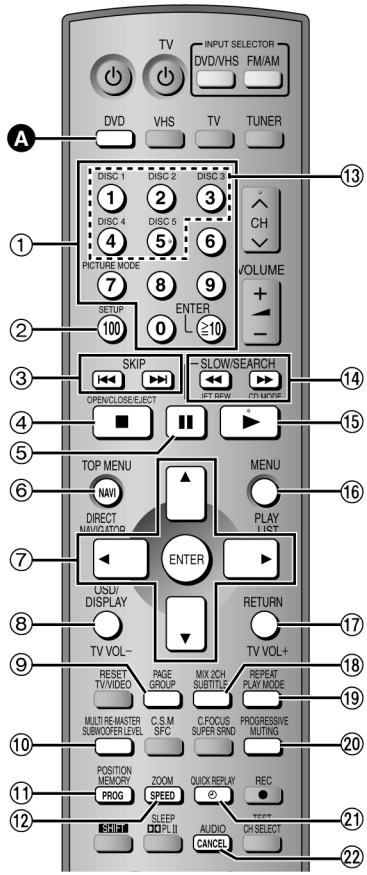
● If SHIFT appears after the button name the function will not work unless you use with [SHIFT] button. Make sure to press [SHIFT] and the button.

Remote control—common buttons



① **Power button [⏻]**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
② **TV Power button [⏻TV]**
③ **Remote control mode selector button [DVD] [VHS] [TV] [TUNER]**
Changes the remote control mode. The button lights once pressed.
The selected mode is held in memory until you press another mode selector button.
The mode selector button lights each time you press an operational control button showing which mode is in use.
④ **TV volume down button [TV VOL−]**
⑤ **Bass adjust button [SUBWOOFER LEVEL]**
⑥ **Sound field control button [SFC]**
Custom sound memory button [C.S.M] SHIFT
⑦ **Shift button [SHIFT]**
To use the functions labeled in orange, press the button while pressing [SHIFT].
⑧ **Dolby Pro Logic II/Dolby Pro Logic button [PLII]**
Sleep timer button [SLEEP] SHIFT
⑨ **Main unit selector button**
DVD/VHS source button [DVD/VHS]
Switch the source on the main unit between DVD and VHS.
Tuner/band button [FM/AM]
Switch the source on the main unit to tuner and change the band.
⑩ **TV channel buttons [∧ ∨ CH]**
⑪ **Volume buttons [+ − VOLUME]**
Volume may be lower when playing DVD-Video than when playing other discs or during television broadcasts. Reduce the volume before playing other sources or returning to the television so volume doesn't increase suddenly.
⑫ **TV volume up button [TV VOL+]**
⑬ **Down-mix button [MIX 2CH]** SHIFT
⑭ **Muting button [MUTING]**
⑮ **Super surround button [SUPER SRND]**
Center focus button [C.FOCUS] SHIFT
⑯ **Speaker channel button [CH SELECT]**
Test signal button [TEST] SHIFT

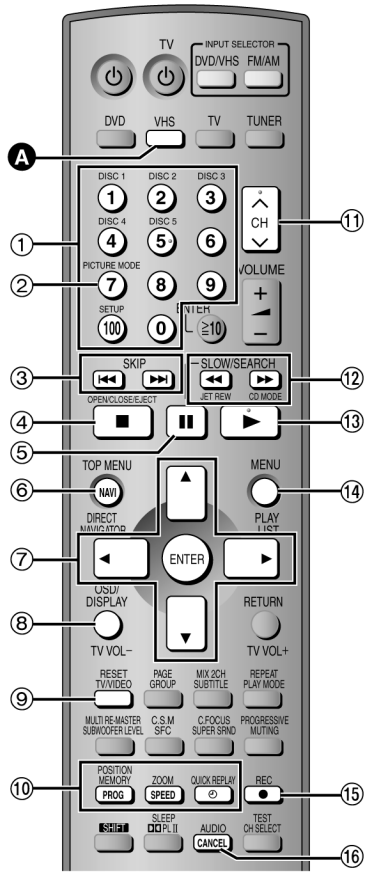
Remote control—DVD operation



Ⓐ **DVD remote control mode button [DVD]**
Switch the remote control mode to DVD. Make sure you press before doing DVD operations. When in DVD mode, the [DVD] button lights each time you press one of the DVD operation buttons indicated below.
① **Numbered buttons [1–9, 0, ≧10/ENTER]**
② **DVD SETUP menu button [SETUP]** SHIFT
③ **Skip buttons [|◀◀ ▶▶| SKIP]**
④ **Stop button [■]**
Open/close button [OPEN/CLOSE/EJECT] SHIFT
⑤ **Pause button [❚❚]**
⑥ **Top menu button [TOP MENU]**
Direct navigator button [DIRECT NAVIGATOR]
⑦ **Cursor buttons [▲ ▼ ◀ ▶]/Enter button [ENTER]**
⑧ **On-screen menu button [OSD/DISPLAY]**
⑨ **Group button [GROUP]**
Still picture select button [PAGE] SHIFT
⑩ **Multi re-master button [MULTI RE-MASTER]** SHIFT
⑪ **Position memory button [POSITION MEMORY]**
⑫ **Zoom button [ZOOM]**
⑬ **Disc buttons [DISC1]–[DISC5]** SHIFT
⑭ **Slow/search buttons [◀◀ ▶▶ SLOW/SEARCH]**
CD mode button [▶▶ CD MODE] SHIFT
⑮ **Play button [▶]**
⑯ **Menu button [MENU]**
Play list button [PLAY LIST]
⑰ **Return button [RETURN]**
⑱ **Subtitle button [SUBTITLE]**
⑲ **Play mode button [PLAY MODE]**
Repeat mode button [REPEAT] SHIFT
⑳ **Progressive output button [PROGRESSIVE]** SHIFT
㉑ **Quick replay button [QUICK REPLAY]**
㉒ **Cancel button [CANCEL]**
Soundtrack button [AUDIO] SHIFT

● If SHIFT appears after the button name the function will not work unless you use with [SHIFT] button. Make sure to press [SHIFT] and the button.

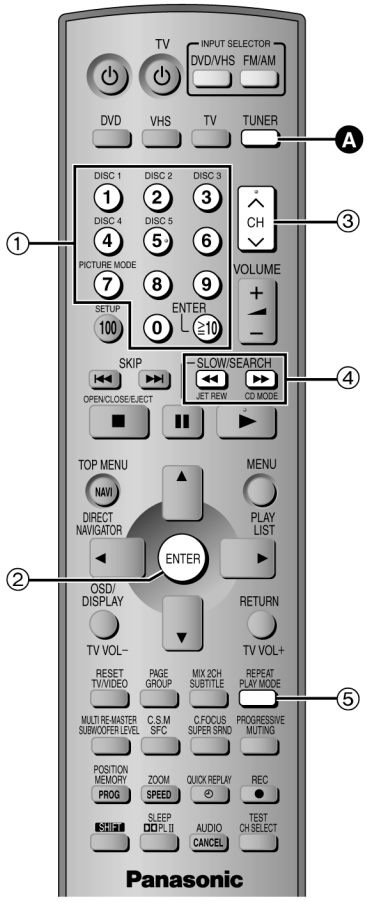
Remote control—VHS operation



Ⓐ VHS remote control mode button [VHS]
Switch the remote control mode to VHS. Make sure you press before doing VHS operations. When in VHS mode, the [VHS] button lights each time you press one of the VHS operation buttons indicated below.

① **Numbered buttons [1–9, 100, 0]**
② **Picture mode button [PICTURE MODE]** SHIFT
③ **Index search button [|◀◀ ▶▶| SKIP]**
④ **Stop button [■]**
Tape eject button [OPEN/CLOSE/EJECT] SHIFT
⑤ **Pause button [❚❚]**
Press and hold for slow
⑥ **Jet navigator button [NAVI]**
⑦ **Cursor buttons [▲ ▼ ◀ ▶]/Enter button [ENTER]**
⑧ **On-screen display button [OSD/DISPLAY]**
⑨ **TV/Video button [TV/VIDEO]**
Tape counter reset button [RESET] SHIFT
⑩ **Timer recording buttons**
Timer programming button [PROG]
Tape speed button [SPEED]
Timer program standby button [🕘]
⑪ **Channel, tracking, and vertical hold buttons [∧ ∨ CH]**
⑫ **Fast-forward/rewind button [◀◀ ▶▶ SLOW/SEARCH]**
Jet rewind button [◀◀ JET REW] SHIFT
⑬ **Play button [▶]**
Press and hold for five seconds to start repeat play
⑭ **Menu button [MENU]**
⑮ **Recording button [● REC]** SHIFT
⑯ **Cancel button [CANCEL]**
Audio button [AUDIO] SHIFT

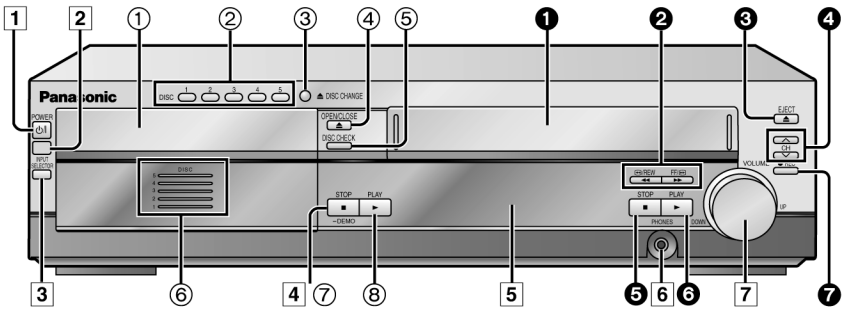
Remote control—TUNER operation



Ⓐ TUNER remote control mode button [TUNER]
Switch the remote control mode to TUNER. Make sure you press before doing TUNER operations. When in TUNER mode, the [TUNER] button lights each time you press one of the TUNER operation buttons indicated below.

① **Numbered buttons [1–9, 0, ≧10/ENTER]**
② **Enter button [ENTER]**
③ **Channel buttons [∧ ∨ CH]**
④ **Tuning buttons [◀◀ ▶▶]**
⑤ **FM mode button [PLAY MODE]**

Main unit and subwoofer



■ Common buttons

1 Power button [⏻/I POWER]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

2 Remote control signal sensor

3 Source selector button [INPUT SELECTOR]
VHS→DVD/CD→FM→AM

4 Demo button [–DEMO]

5 Display

6 Headphone terminal [PHONES]

7 Volume dial [VOLUME DOWN, UP]

■ DVD section

① Drawer

② Disc buttons [DISC1–5]

③ Disc change button [▲ DISC CHANGE]

④ Drawer open/close button [▲ OPEN/CLOSE]

⑤ Disc check button [DISC CHECK]

⑥ Disc indicators

⑦ Stop button [■ STOP]

⑧ Play button [▶ PLAY]

■ VHS section

❶ Tape slot

❷ Fast-forward and rewind buttons [◀◀ (◀◀)/REW] [▶▶ FF/(▶▶)]

❸ Tape eject button [▲ EJECT]

❹ Channel buttons [∧ CH] [∨ CH]

❺ Stop button [■ STOP]

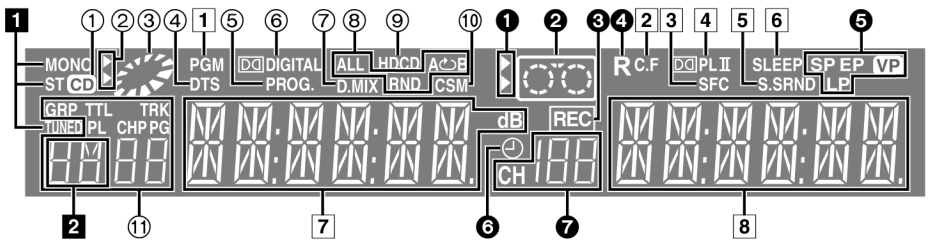
❻ Play button [▶ PLAY]

❼ Recording button [● REC]

■ Subwoofer

1 AC supply indicator [AC IN]
This indicator lights when the subwoofer is connected to a household AC outlet.

Main unit display



■ Common display

1 Program indicator

2 Center Focus indicator

3 Sound Field Control indicator

4 Dolby Pro Logic II/Dolby Pro Logic indicator

5 Super Surround indicator

6 SLEEP timer indicator

7 Main display (Orange)
Disc play elapsed time, program recording start time, volume, TUNER frequency/channel display, various messages, etc.

8 Main display (White)
Time display, video play/record elapsed time, program recording end time, various messages, etc.

■ DVD operation

① CD mode indicator
Lights when CD mode is on.

② DVD selector indicator
Lights when DVD is selected.

③ Operation status of DVD section
- Lights when a disc is inserted.
- Displays play status graphically.
  Rotating: playing
  Stopped: paused

④ DTS indicator

⑤ Progressive video indicator

⑥ Dolby Digital indicator

⑦ Down mix indicator

⑧ Play sequence indicator
ALL RND: During all disc random play
RND: During random play
(↻): During repeat
A (↻) B: During A-B repeat

⑨ HDCD indicator

⑩ Custom Sound Memory indicator

⑪ Group/Play list/Track/Title/Chapter/Program number display

■ VHS operation

❶ VHS selector indicator
Lights when the selector is in VHS mode.

❷ Operation status of VHS section
- Lights when a video cassette is inserted.
- Flashes when recording or timer recording is attempted with no video cassette inserted.
- Displays play status graphically.
  Rotating: playing
  Stopped: paused

❸ Recording indicator

❹ Repeat playback indicator

❺ Tape speed indicator

❻ Timer program recording indicator

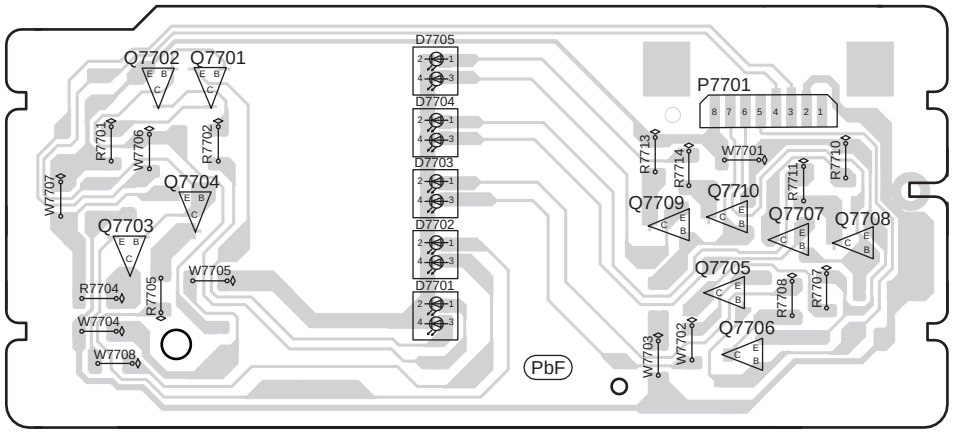
❼ Channel display

■ Tuner operation

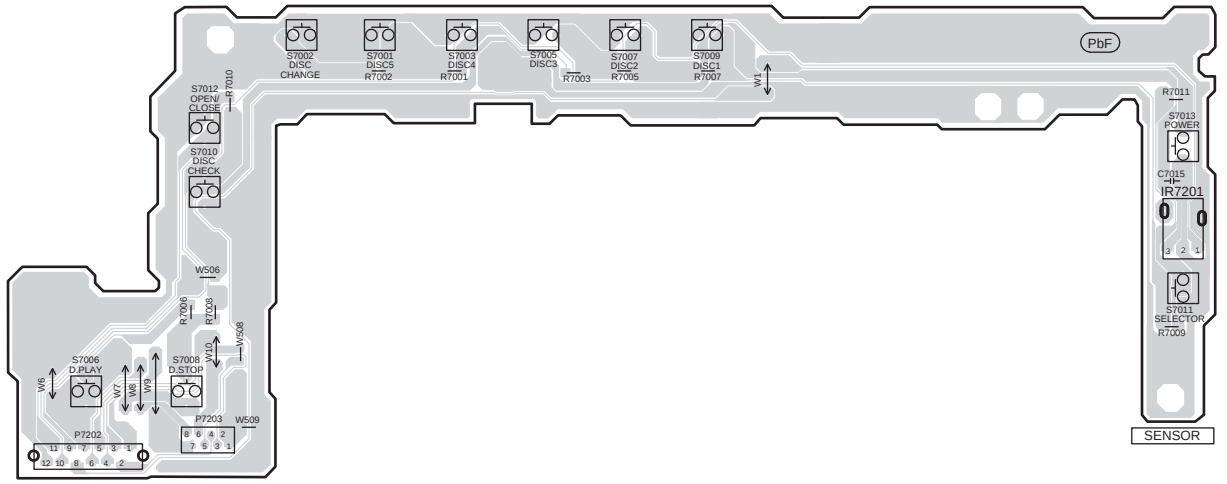
1 Radio broadcast display
MONO: Forced monaural
ST: Stereo
TUNED: Receiving radio signal

2 Band display

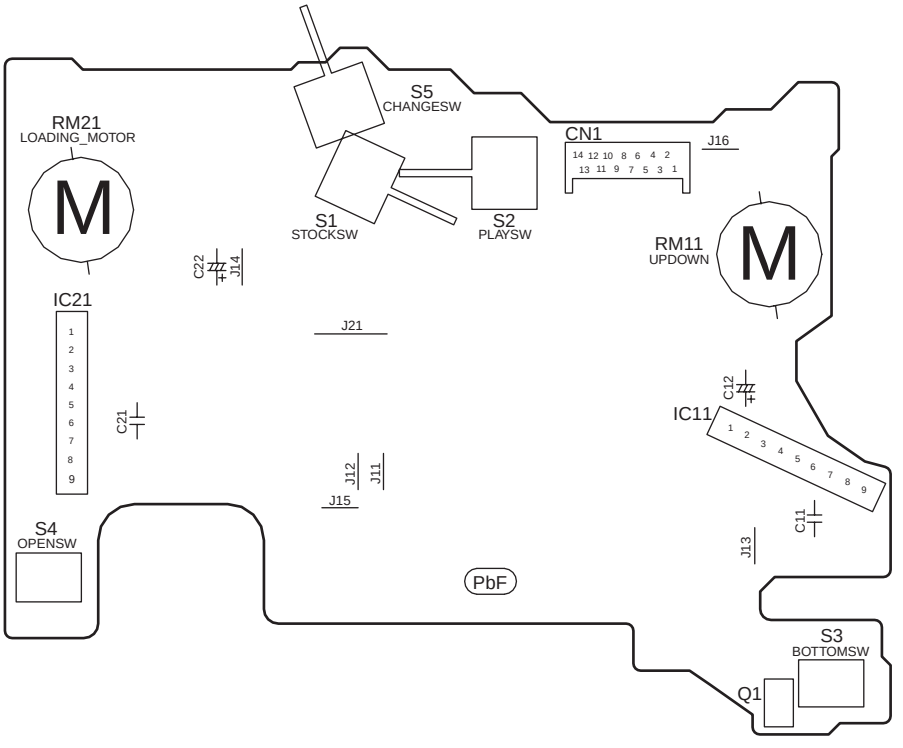
F 5 DVD LED P.C.B (VEPV0007A)



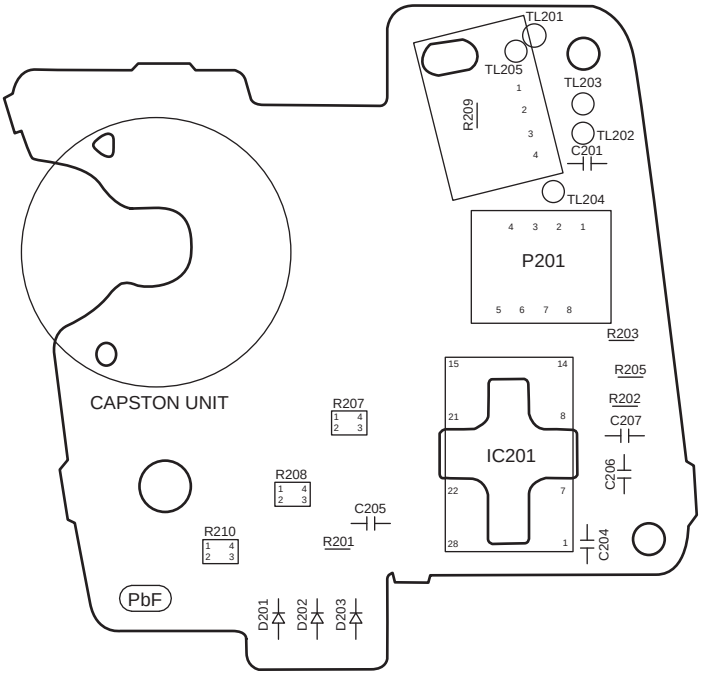
G PANEL A P.C.B (VEPV0005A)



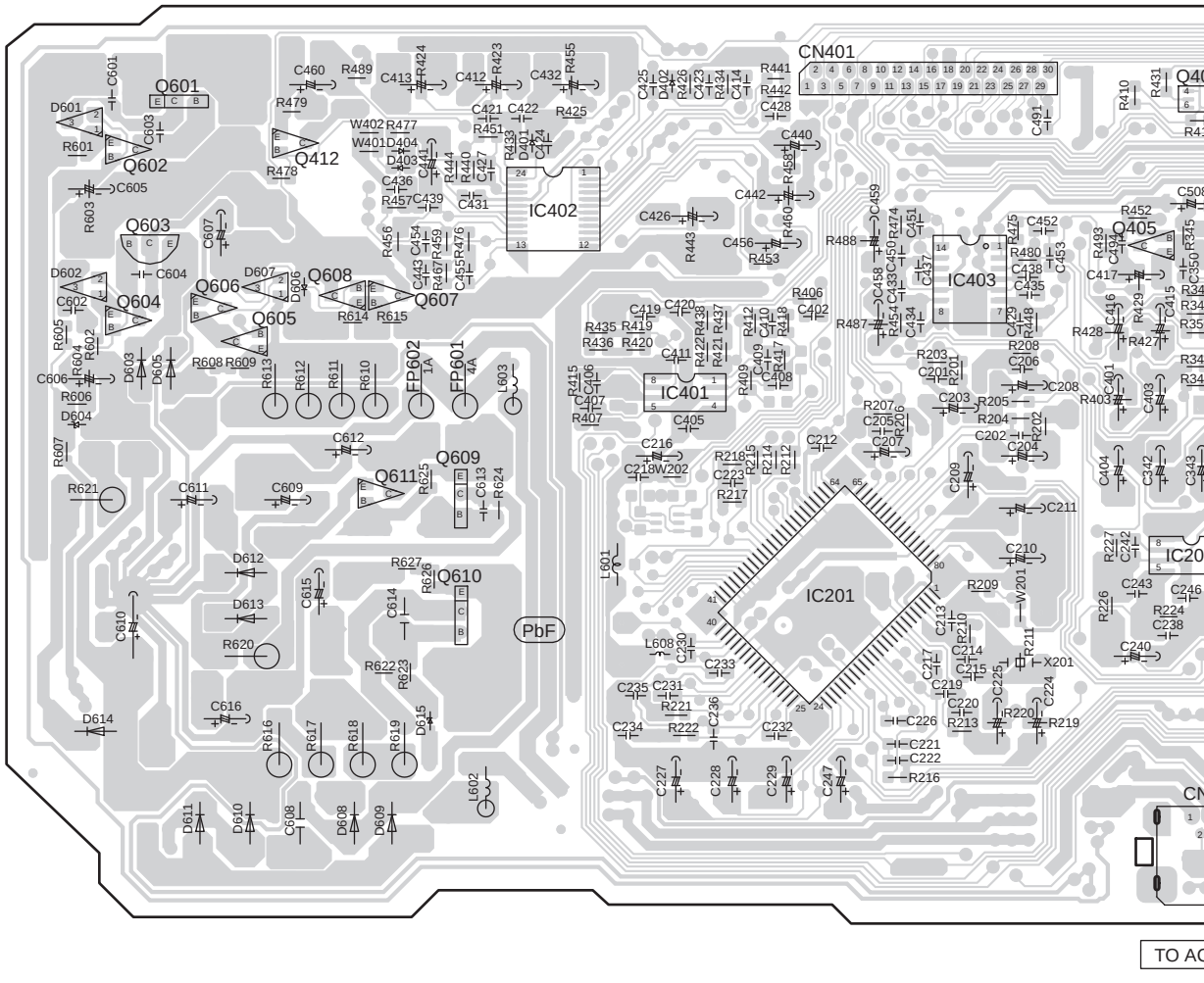
H CD LOADING P.C.B (REP3569A)



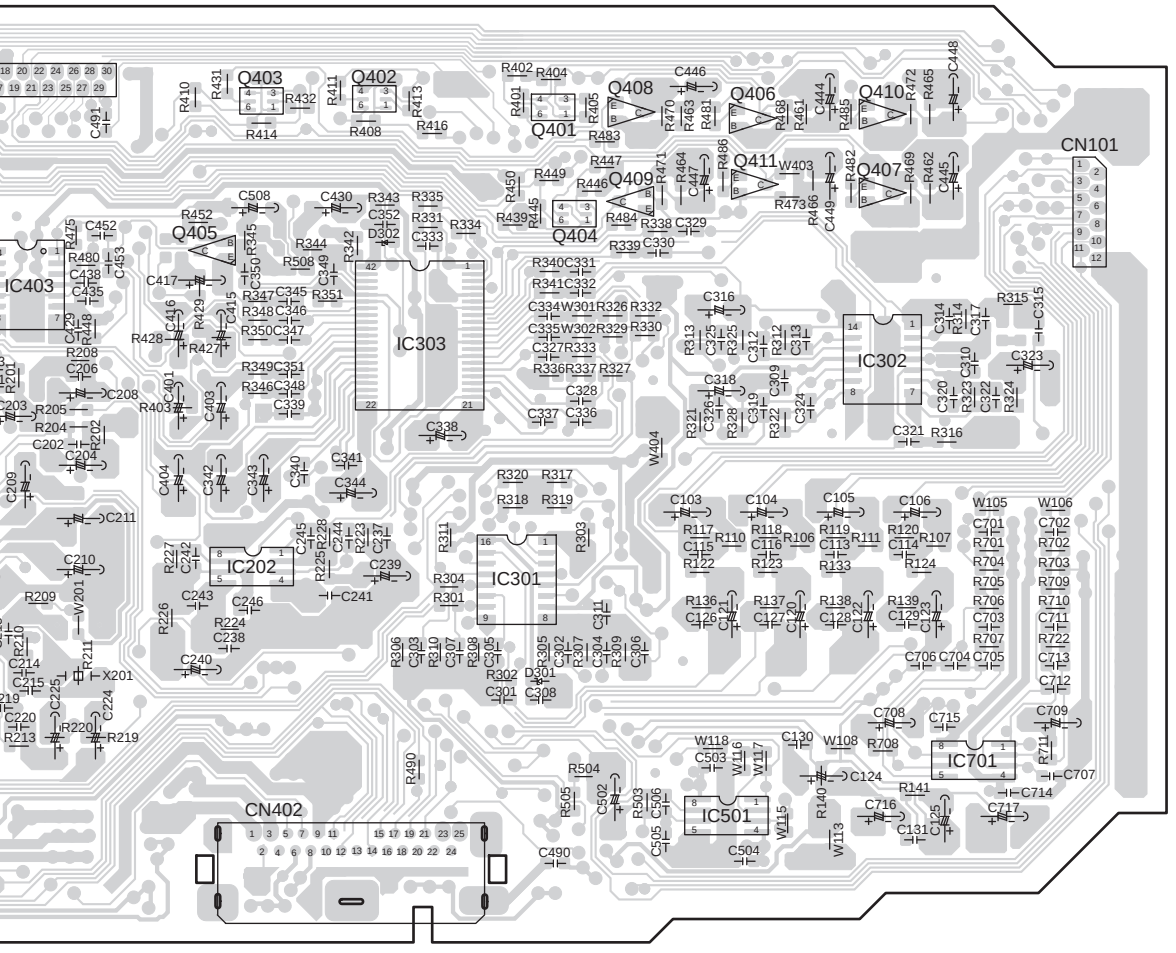
I VCR DECK P.C.B (VEP02578A)



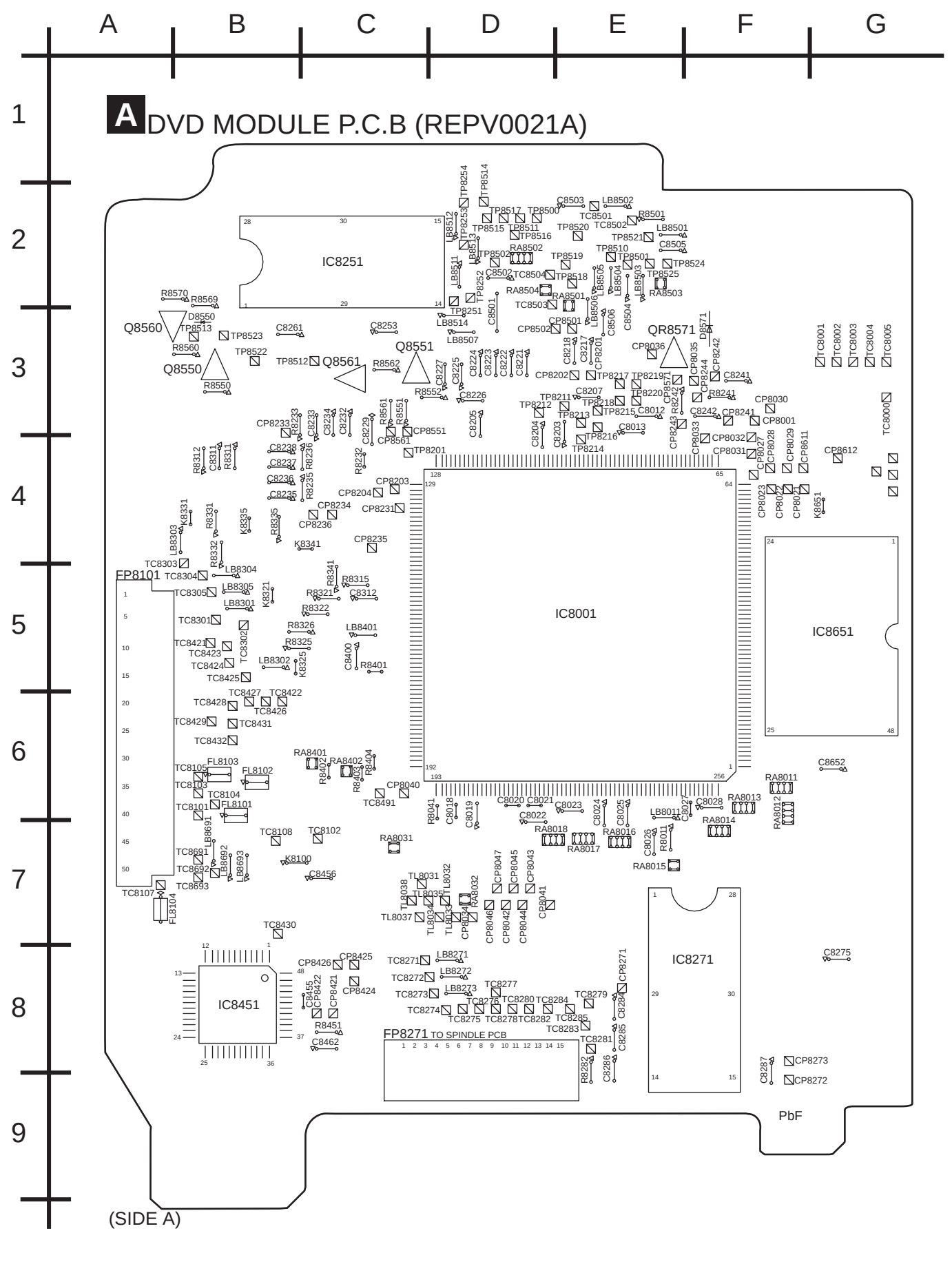
C DSP P.C.B (VEPV0002A)



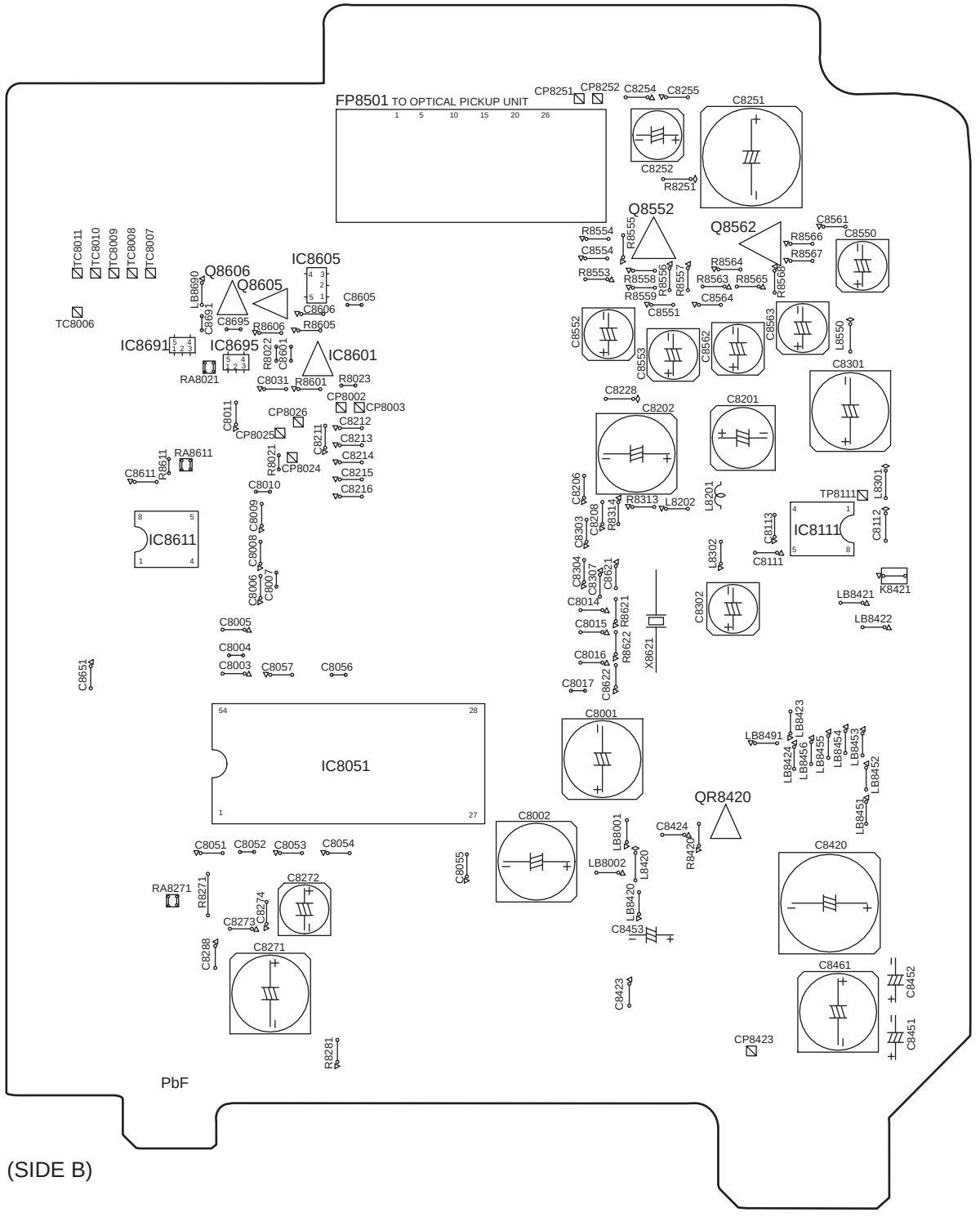
G H I J K L M



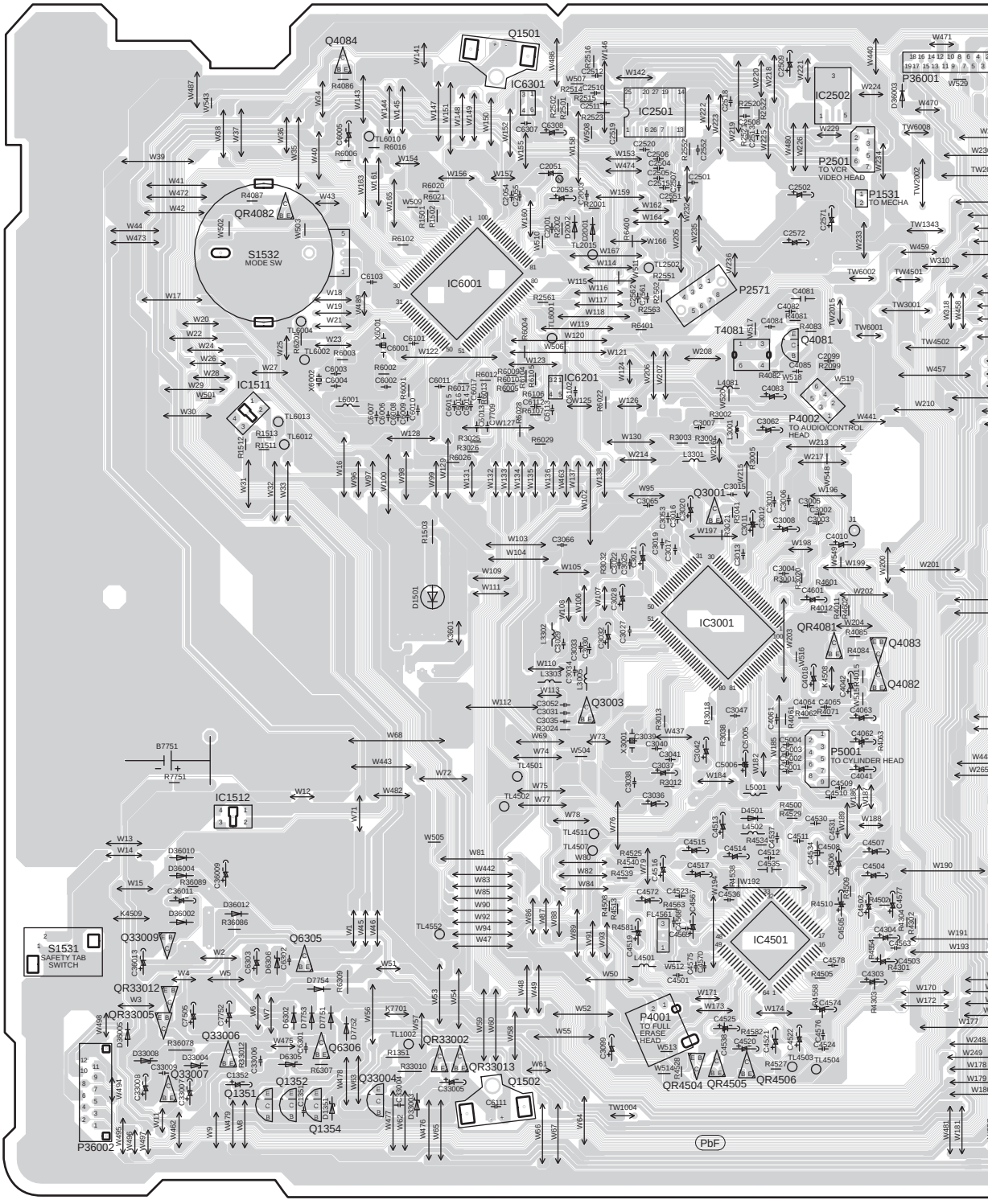
TO ACTIVE SUBWOOFER UNIT

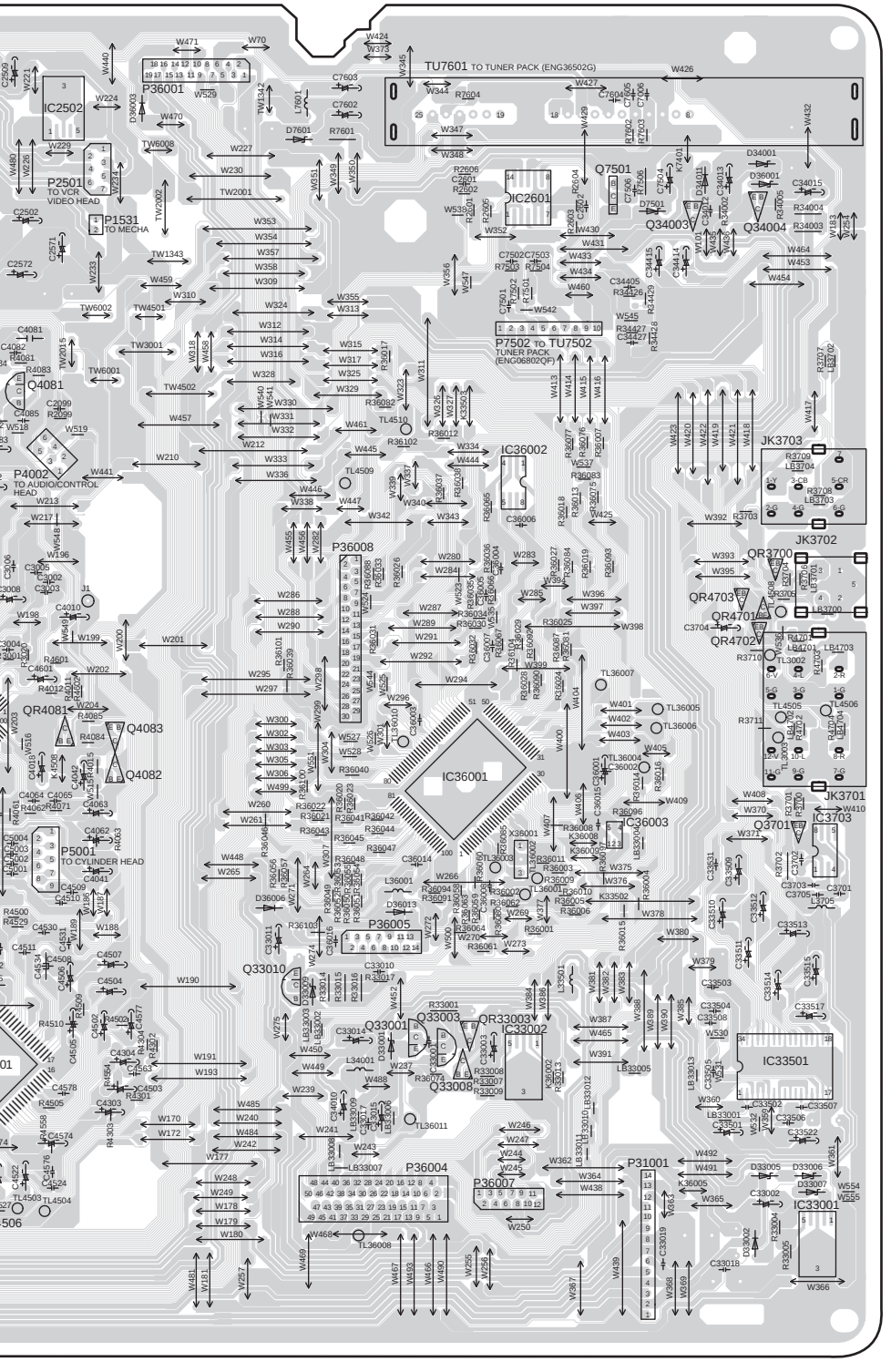

A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
A DVD MODULE P.C.B (REPV0021A)
IC8251
IC8001
IC8651
IC8271
IC8451
Q8560
Q8550
Q8551
Q8561
QR8571
FP8101
FP8271 TO SPINDLE PCB
PbF
(SIDE A)

A DVD MODULE P.C.B (REPV0021A)

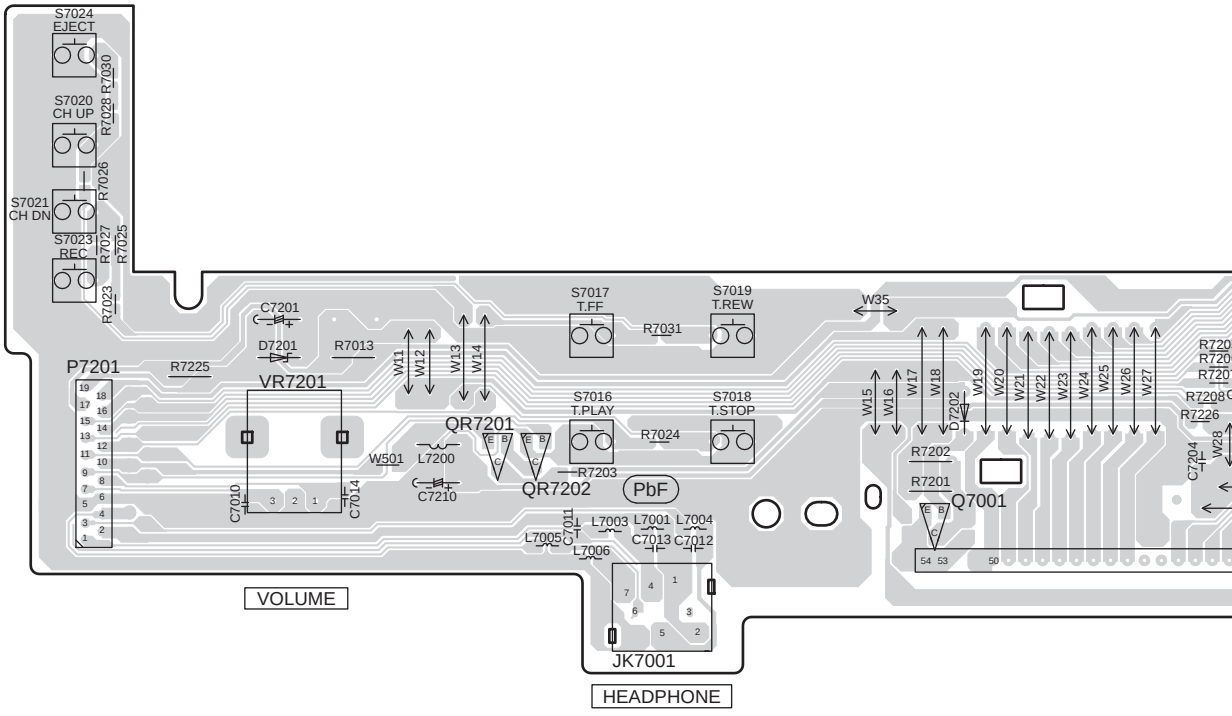


B MAIN P.C.B (VEPV0001A)

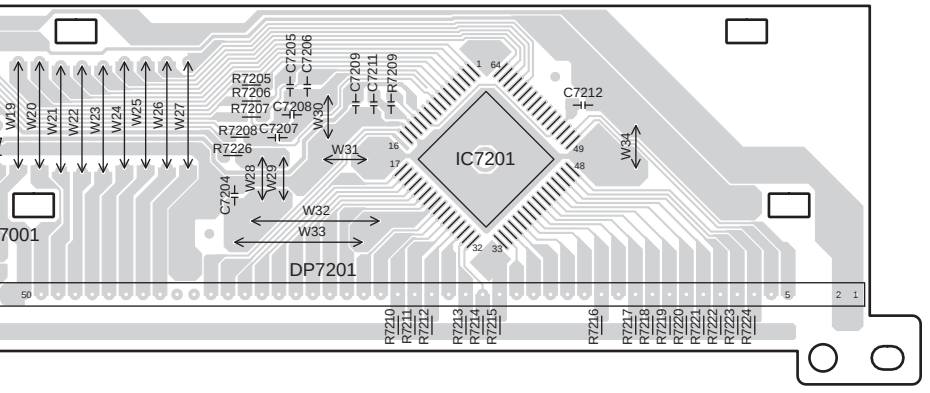



G
H
I
J
K
L
M
TU7601 TO TUNER PACK (ENG36502G)
P7502 TO TU7502 TUNER PACK (ENG06802QF)
P3600 1
P2501 TO VCR VIDEO HEAD
P1531 TO MECHA
P4002 TO AUDIO/CONTROL HEAD
P5001 TO CYLINDER HEAD
IC2502
IC2601
IC36002
IC36001
IC36003
IC33002
IC33501
Q7501
Q34003
Q34004
Q4081
Q4083
Q4082
Q3701
Q3703
Q33010
Q33001
Q33003
Q33008
P36008
P36005
P36004
P36007
P31001
JK3703
JK3702
QR3700
QR4703
QR4701
QR4702
QR4081
RF IN/OUT
FM/AM ANTENNA
COMPONENT VIDEO OUT
DVD
S-VIDEO
LINE OUT
VIDEO OUT
DVD/VCR
LINE IN
VIDEO IN
EXT

E PANEL B P.C.B (VEPV0006A)



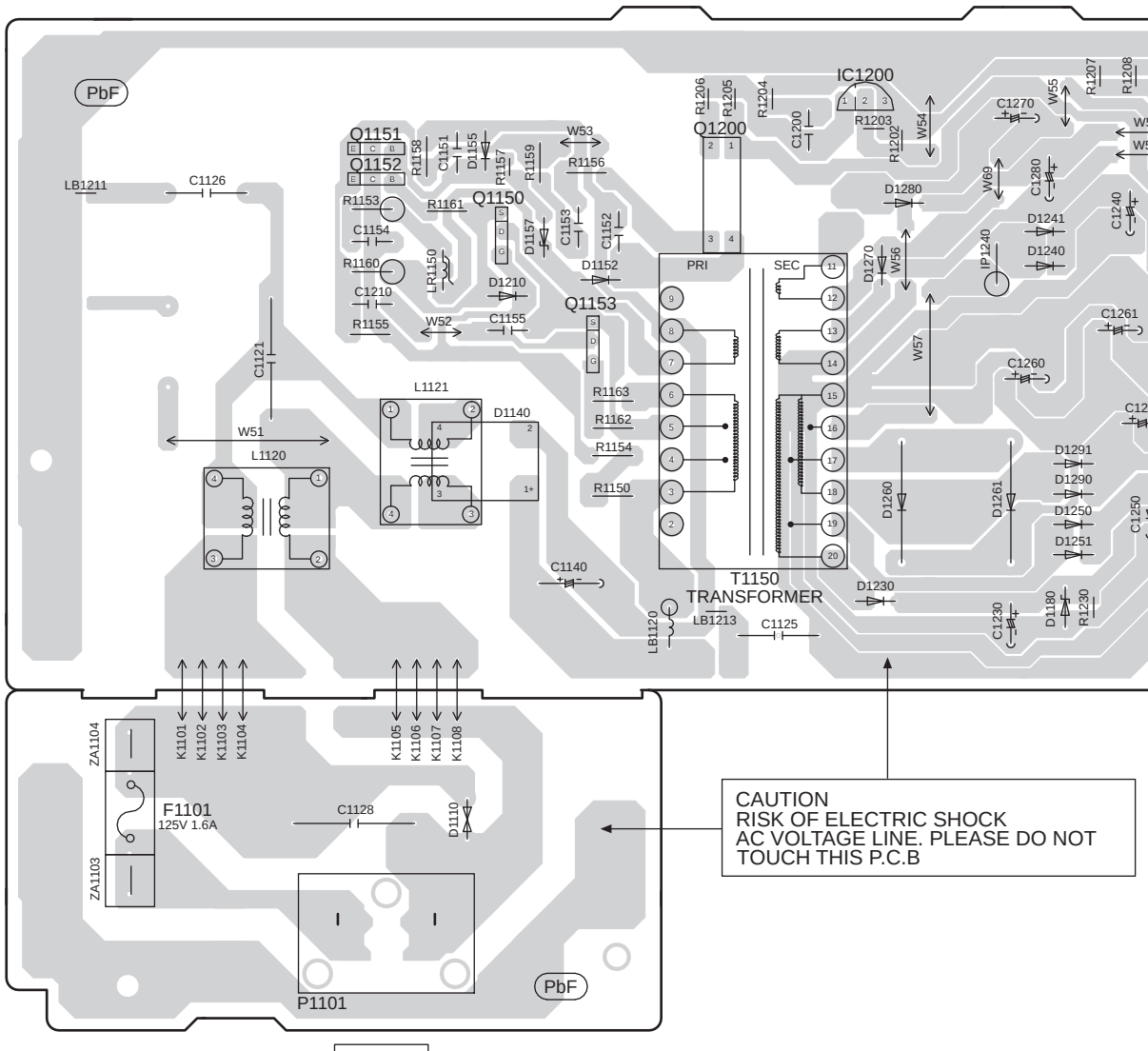
G H I J K L M


W19
W20
W21
W22
W23
W24
W25
W26
W27
R7205
R7206
R7207
R7208
R7226
C7205
C7206
C7208
C7207
W30
W31
C7209
C7211
R7209
C7212
W34
C7204
W28
W29
W32
W33
IC7201
1
64
16
49
17
48
32
33
DP7201
50
5
2
1
R7210
R7211
R7212
R7213
R7214
R7215
R7216
R7217
R7218
R7219
R7220
R7221
R7222
R7223
R7224

A B C D E F G

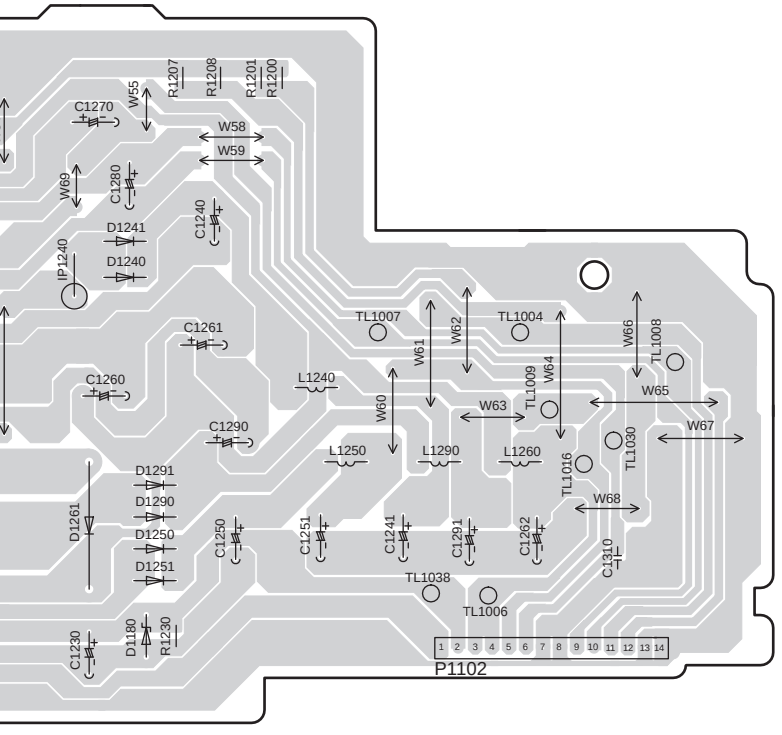
1 2 3 4 5 6 7 8 9

D POWER P.C.B (VEPV0004A)



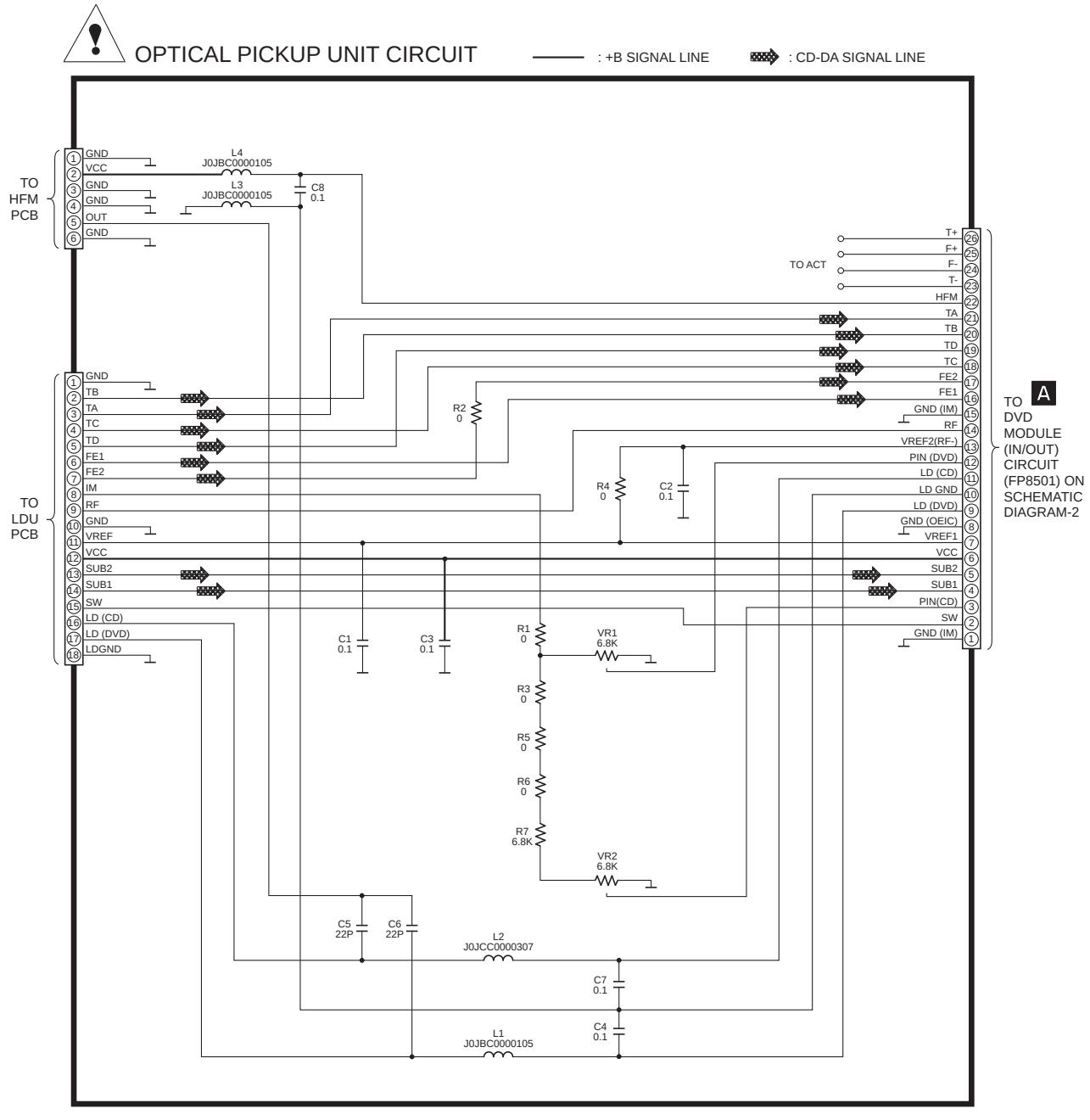
J AC INLET P.C.B (VEPV0003A)

G H I J K L M



SHOCK
PLEASE DO NOT

SCHEMATIC DIAGRAM - 1



SCHEMATIC DIAGRAM - 2

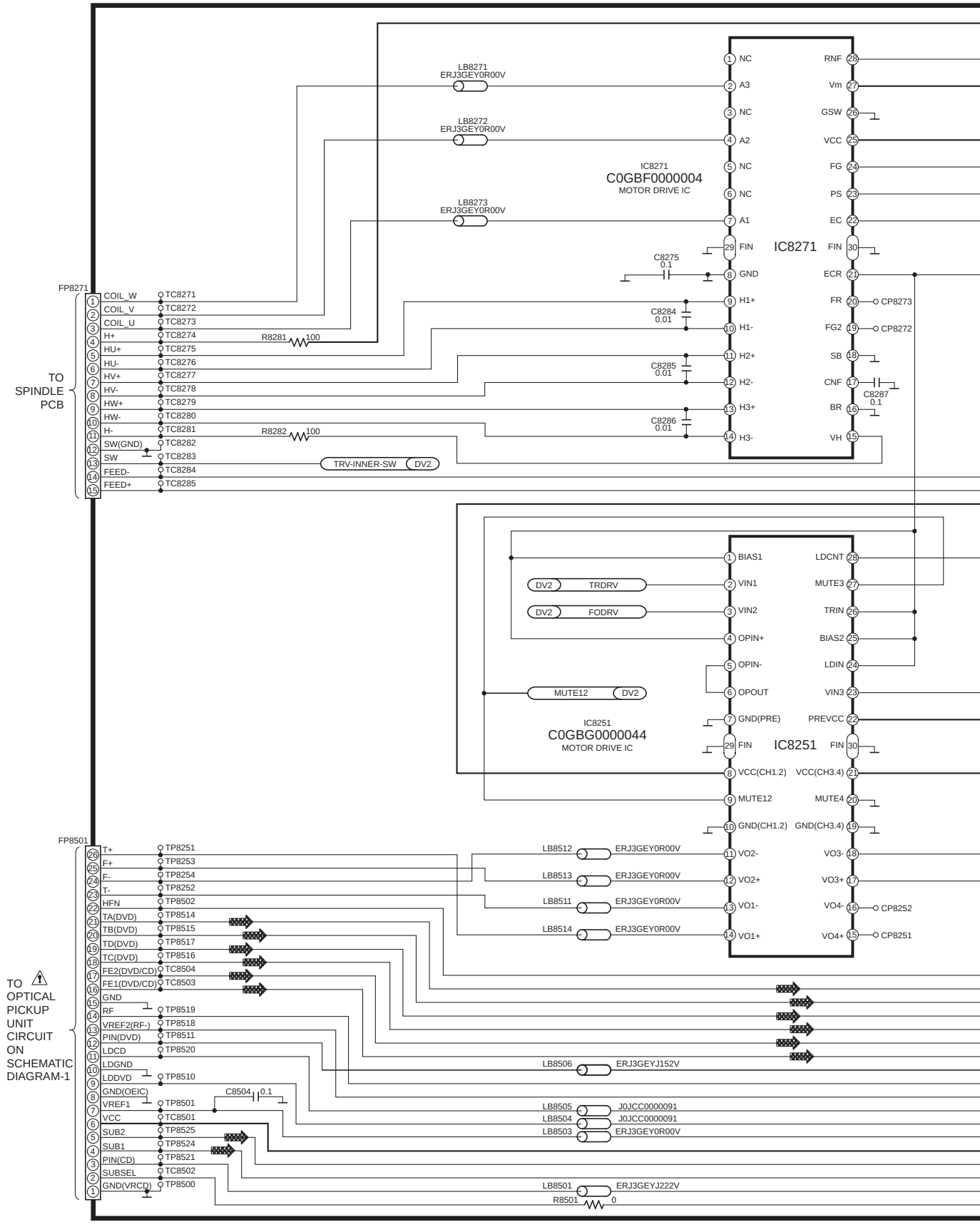
A

SIDE A SIDE B

DVD MODULE (IN/OUT) CIRCUIT

: +B SIGNAL LINE

: CD-DA SIGNAL LINE



SCHEMATIC DIAGRAM - 3

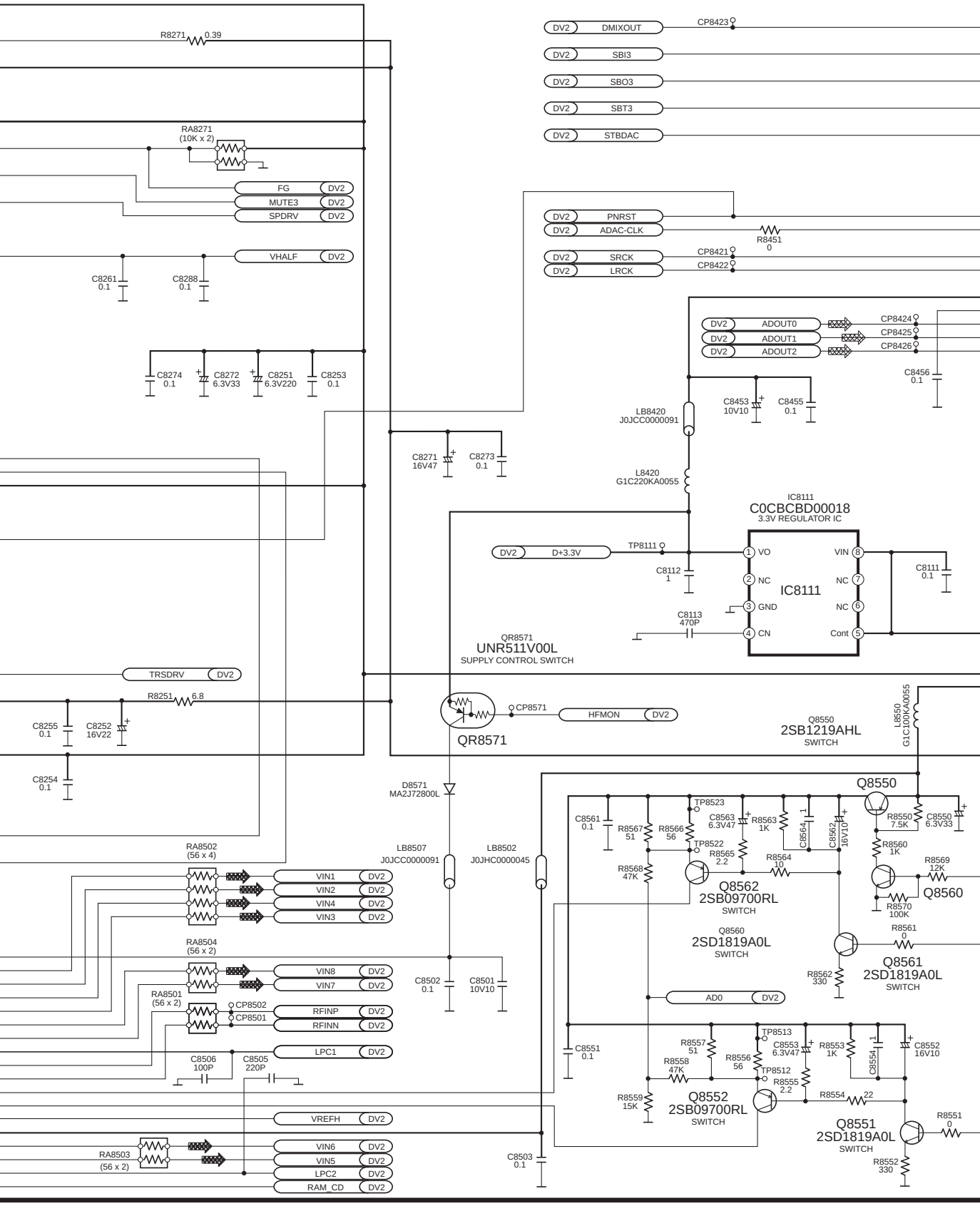
A

DVD MODULE (IN/OUT) CIRCUIT

: +B SIGNAL LINE

: DVD AUDIO SIGNAL LINE

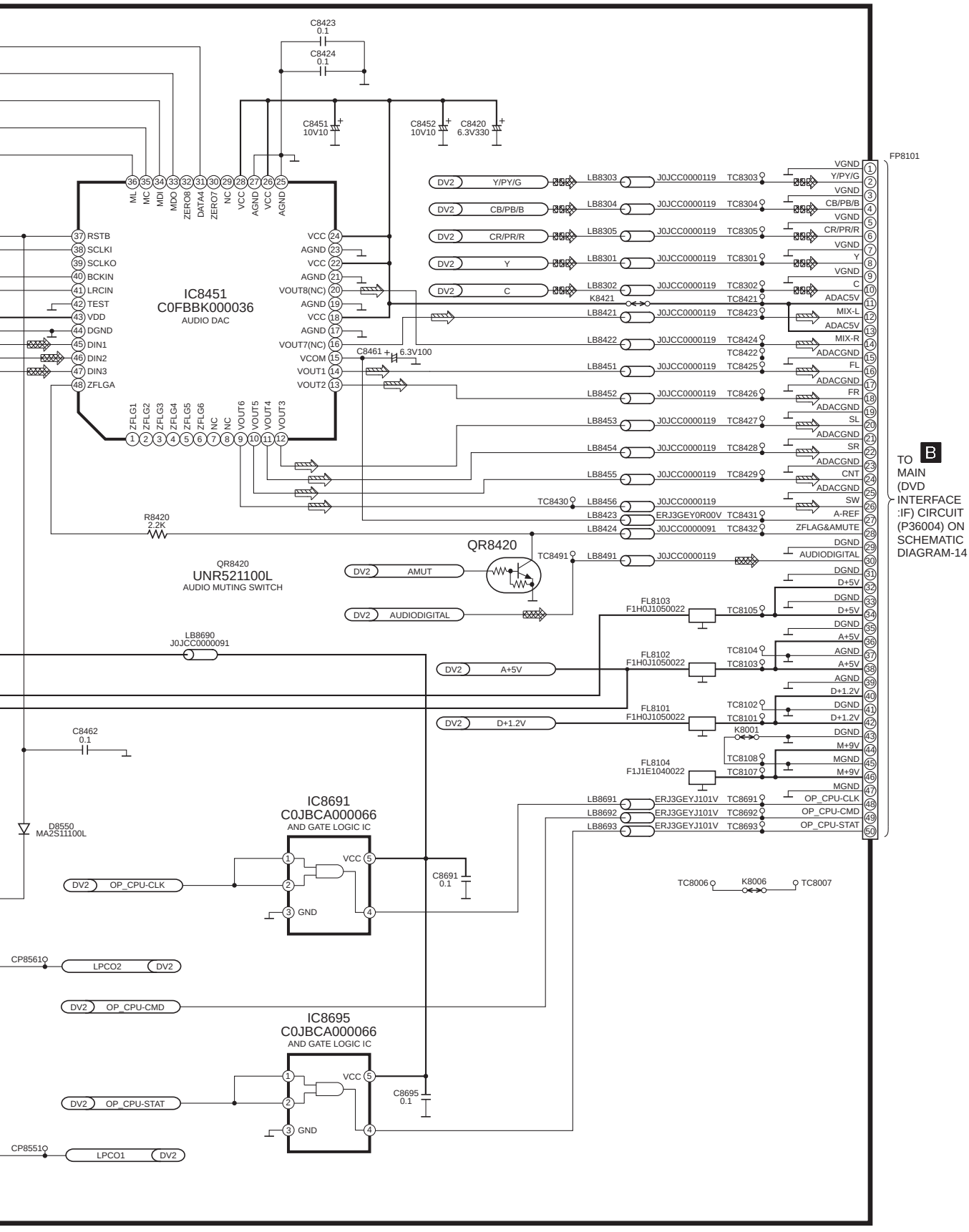
: CD-DA SIGNAL LINE



SCHEMATIC DIAGRAM - 4

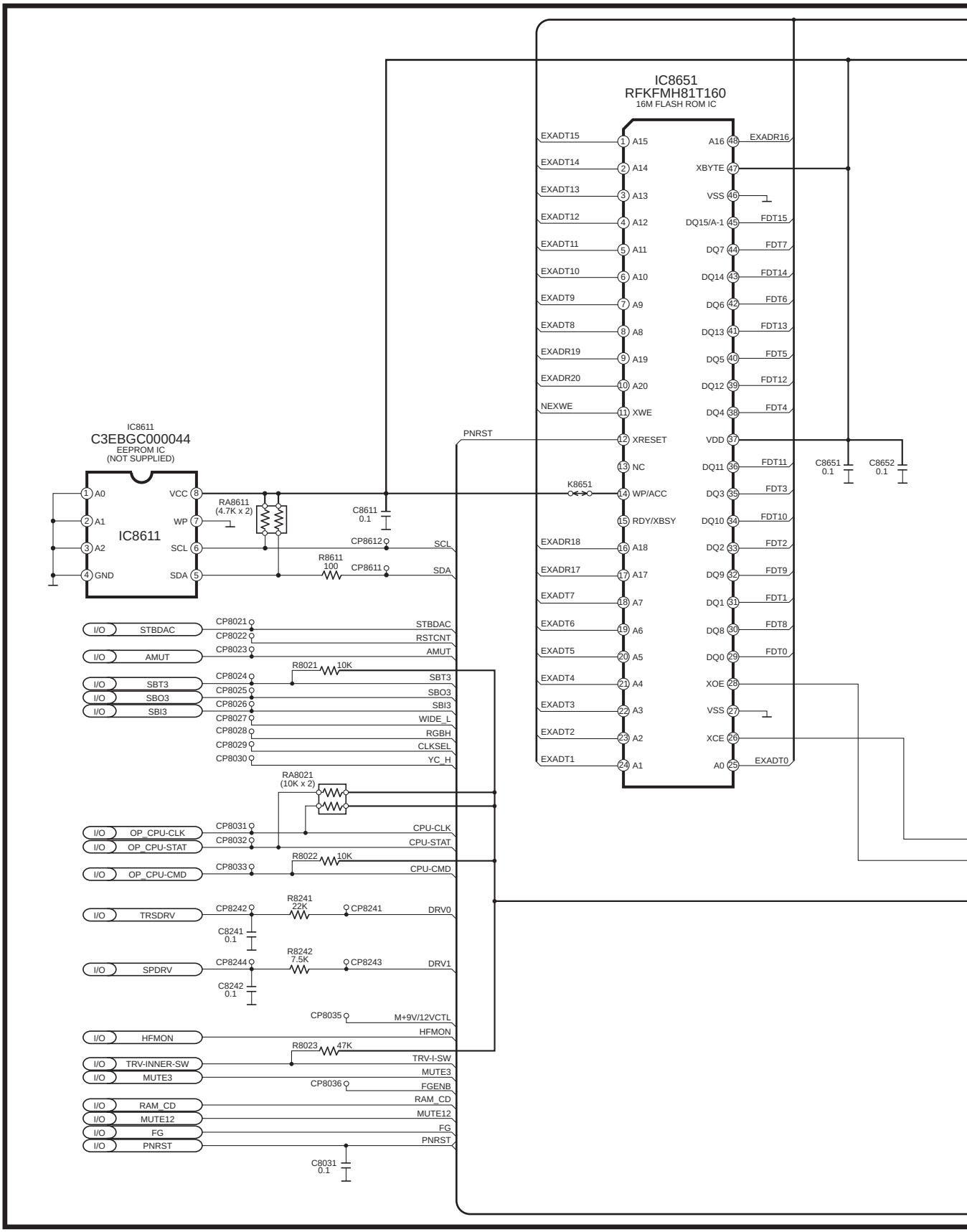
A DVD MODULE (IN/OUT) CIRCUIT

: MAIN SIGNAL LINE
: +B SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: DVD VIDEO SIGNAL LINE



A DVD MODULE (DV2) CIRCUIT

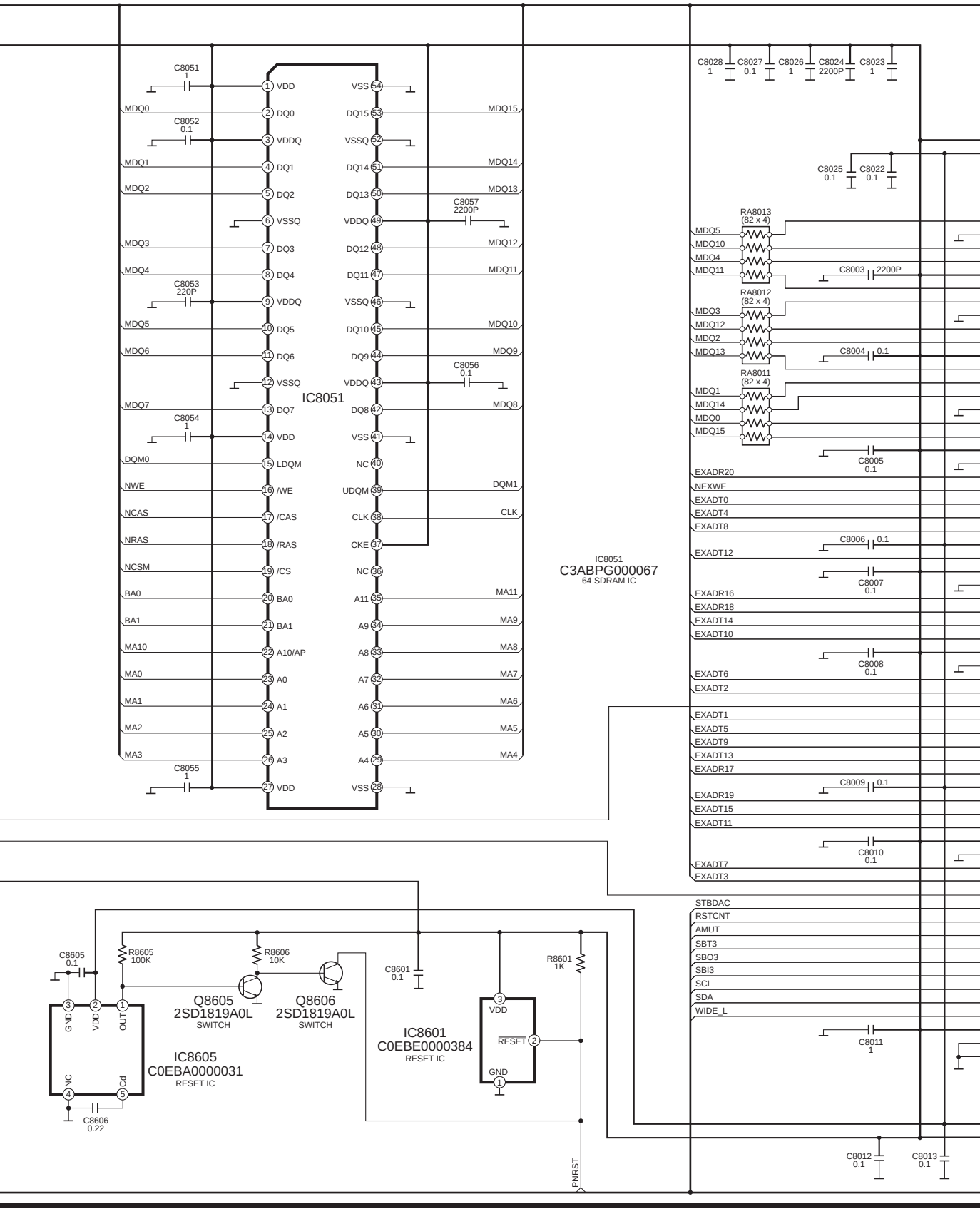
——— : +B SIGNAL LINE



A

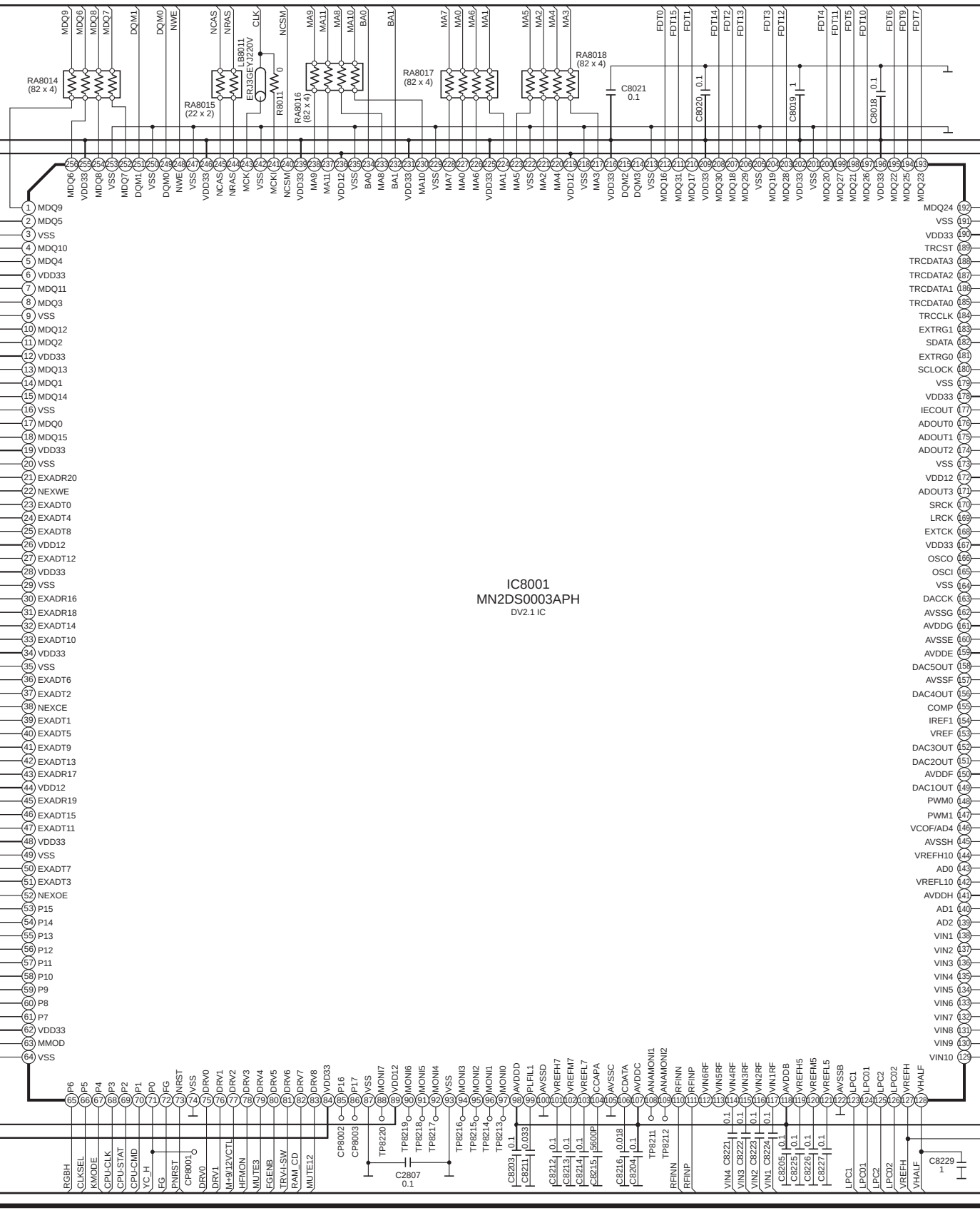
DVD MODULE (DV2) CIRCUIT

: +B SIGNAL LINE



A DVD MODULE (DV2) CIRCUIT

: +B SIGNAL LINE

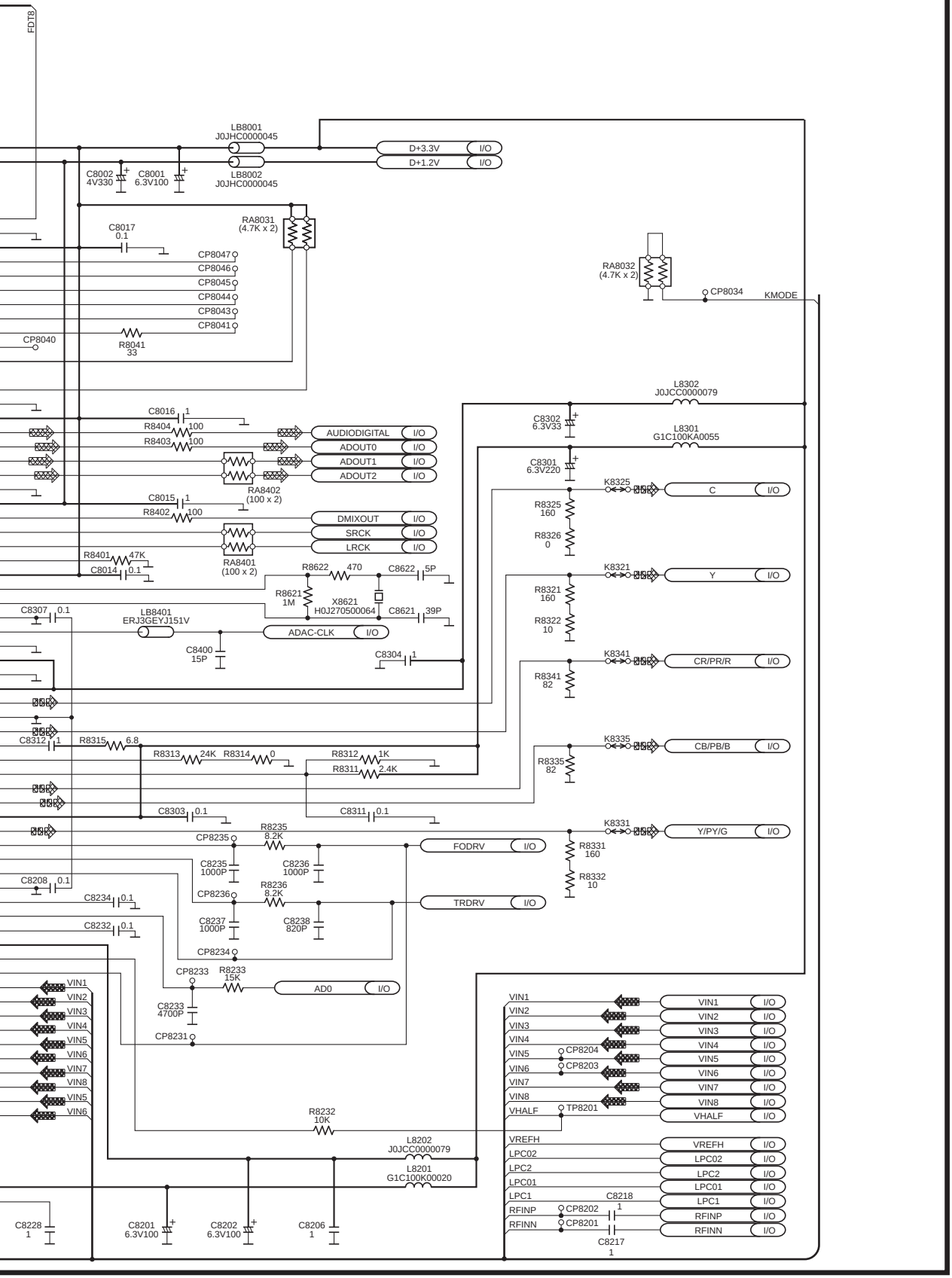


SCHEMATIC DIAGRAM - 8

A

DVD MODULE (DV2) CIRCUIT

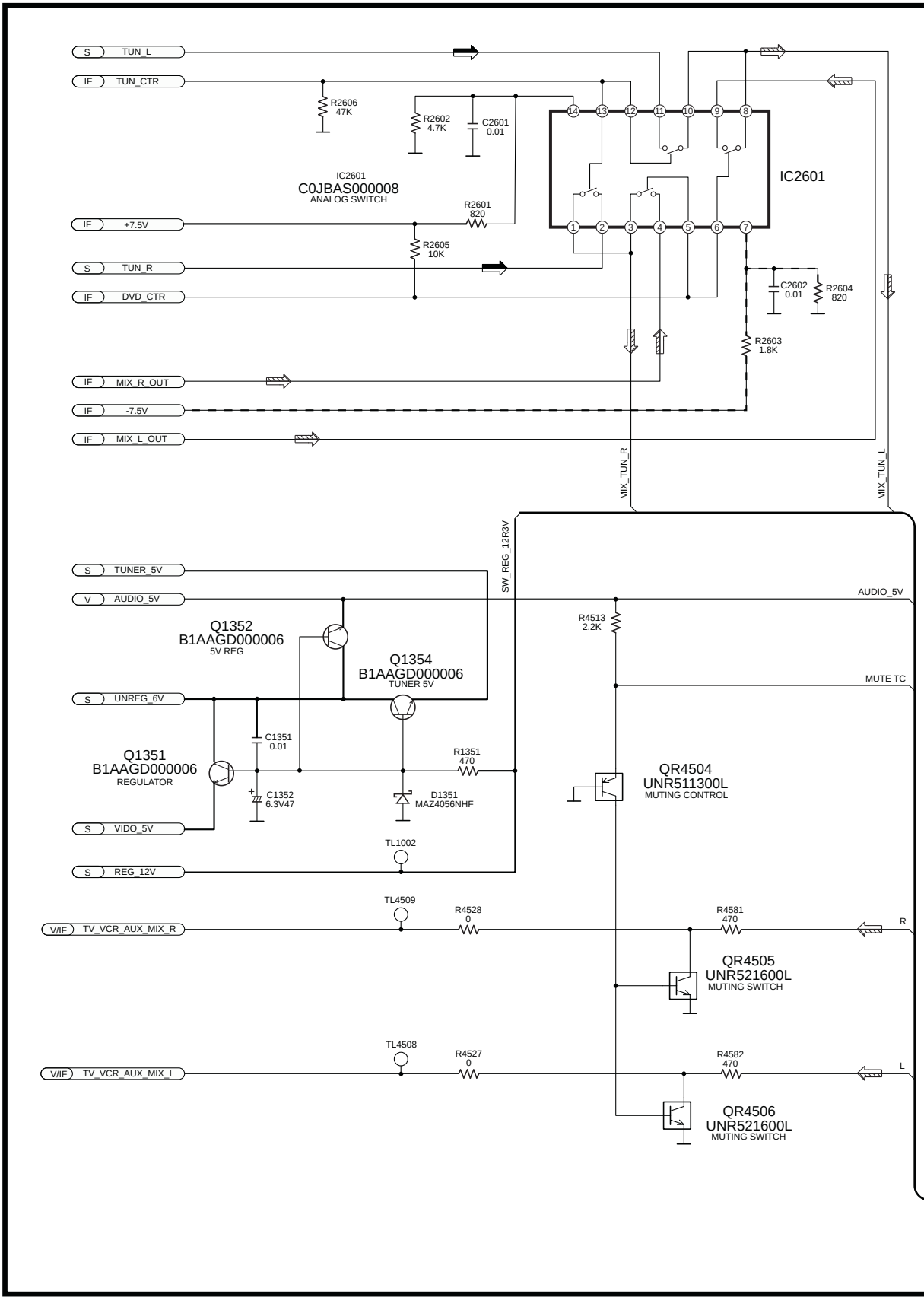
: CD-DA SIGNAL LINE
: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE



SCHEMATIC DIAGRAM-9

B MAIN (AUDIO:A) CIRCUIT

: +B SIGNAL LINE
: -B SIGNAL LINE
: MAIN SIGNAL LINE
: AM/FM SIGNAL LINE



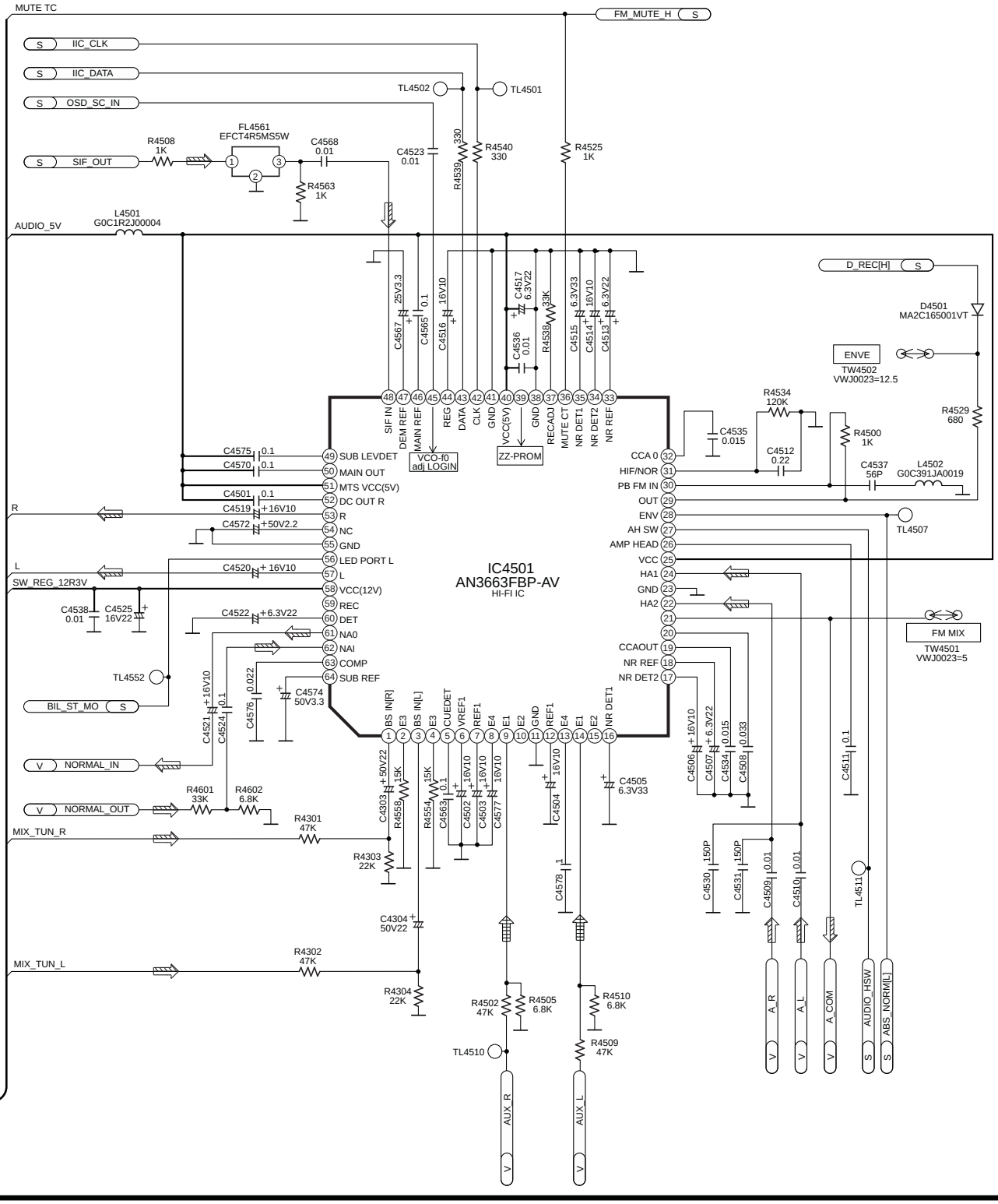
SCHEMATIC DIAGRAM-10

B MAIN (AUDIO:A) CIRCUIT

: +B SIGNAL LINE

: MAIN SIGNAL LINE

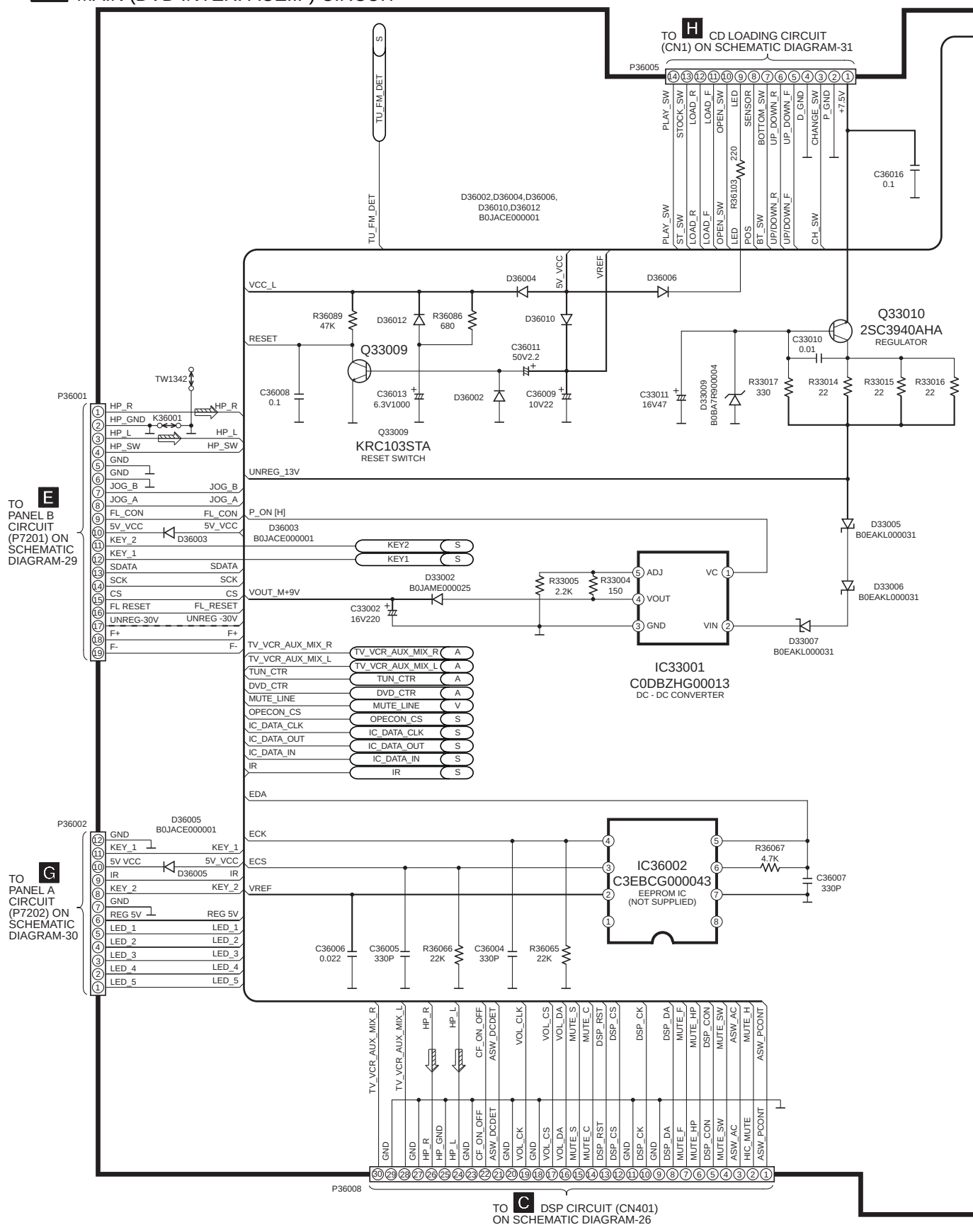
: AUX SIGNAL LINE



SCHEMATIC DIAGRAM-11

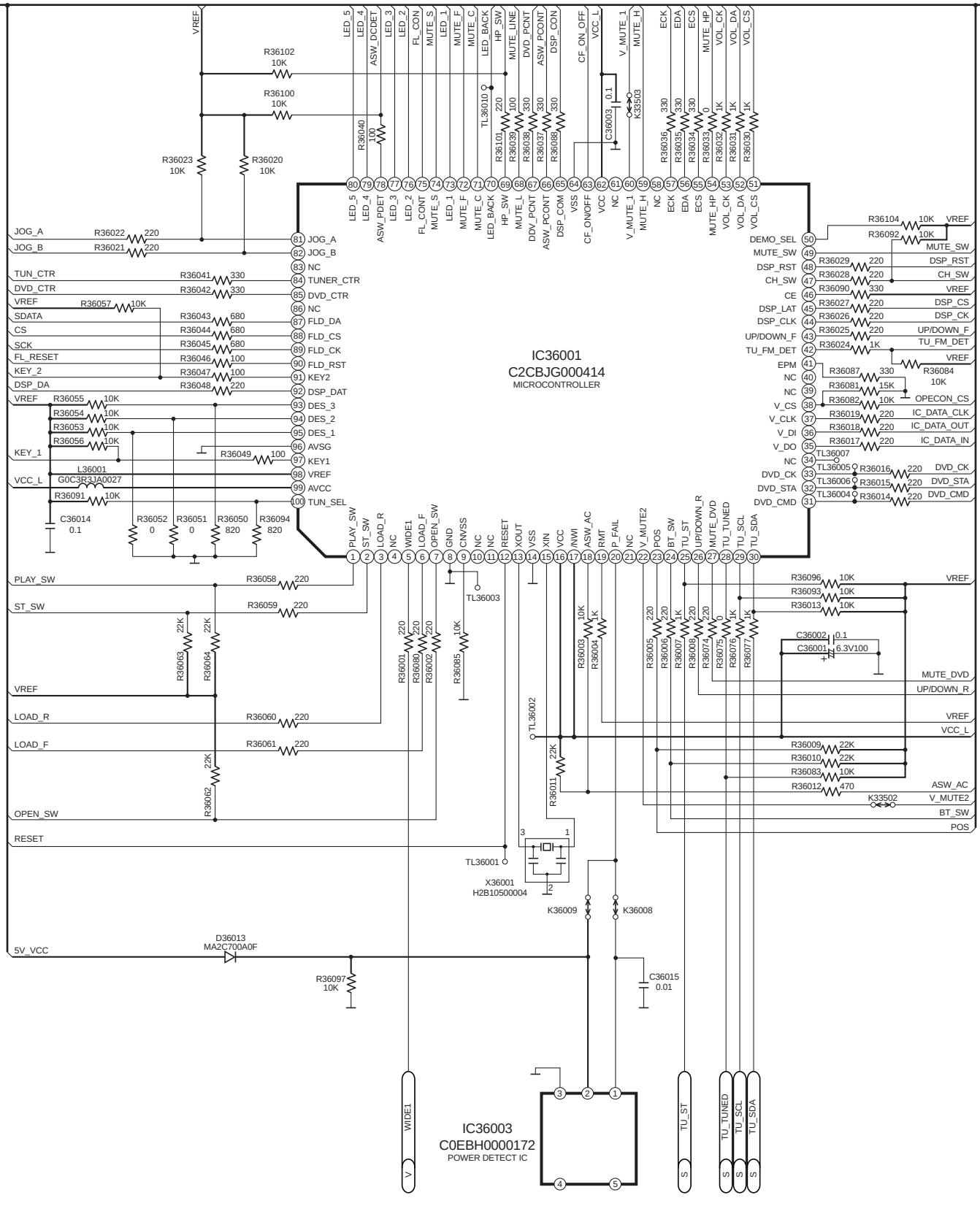
B MAIN (DVD INTERFACE:IF) CIRCUIT

: +B SIGNAL LINE
: -B SIGNAL LINE
: MAIN SIGNAL LINE



B MAIN (DVD INTERFACE:IF) CIRCUIT

——— : +B SIGNAL LINE



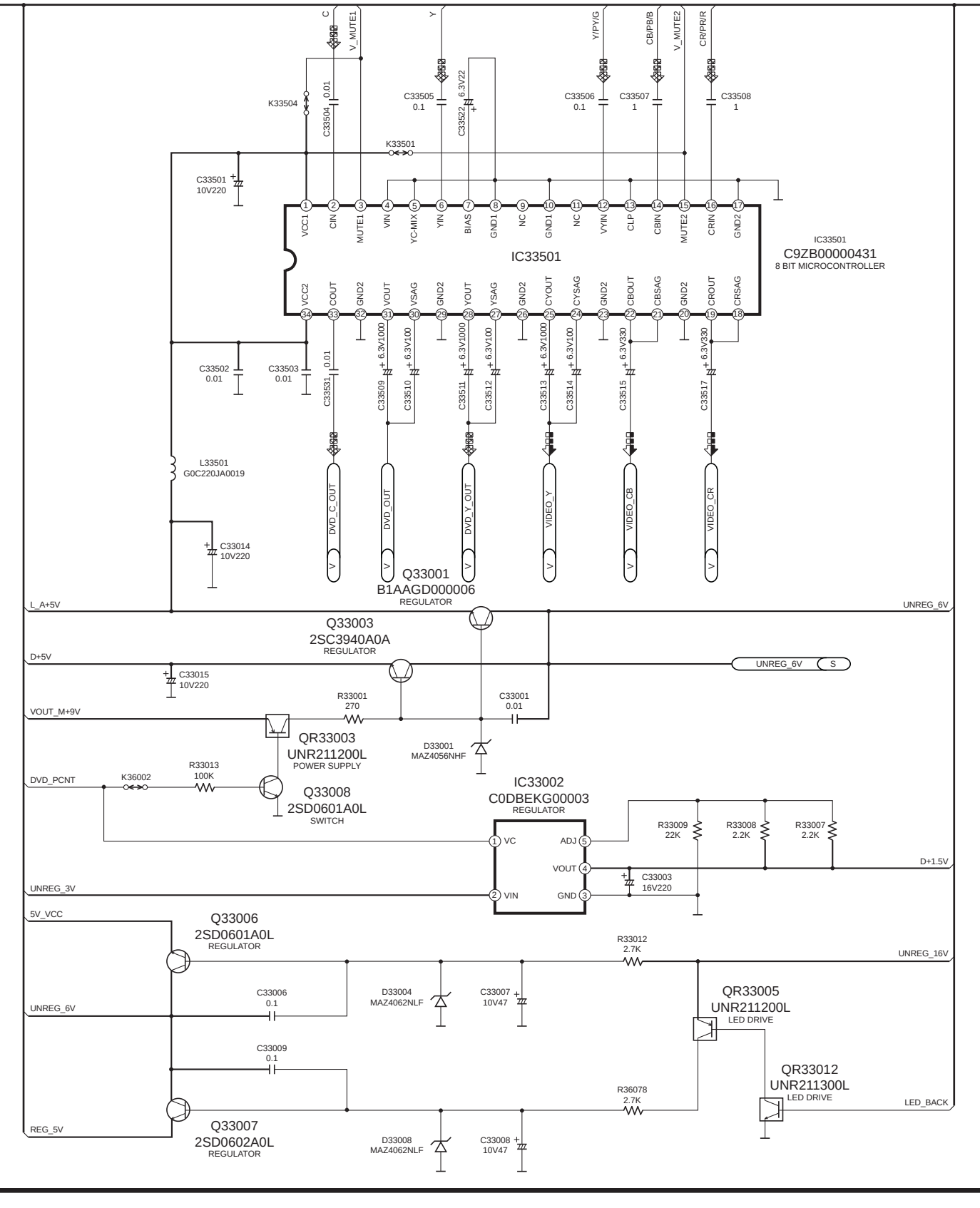
SCHEMATIC DIAGRAM-13

B MAIN (DVD INTERFACE:IF) CIRCUIT

: +B SIGNAL LINE

: DVD VIDEO SIGNAL LINE

: VIDEO SIGNAL LINE



SCHEMATIC DIAGRAM-14

B MAIN (DVD INTERFACE:IF) CIRCUIT

: +B SIGNAL LINE
: -B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: MAIN SIGNAL LINE